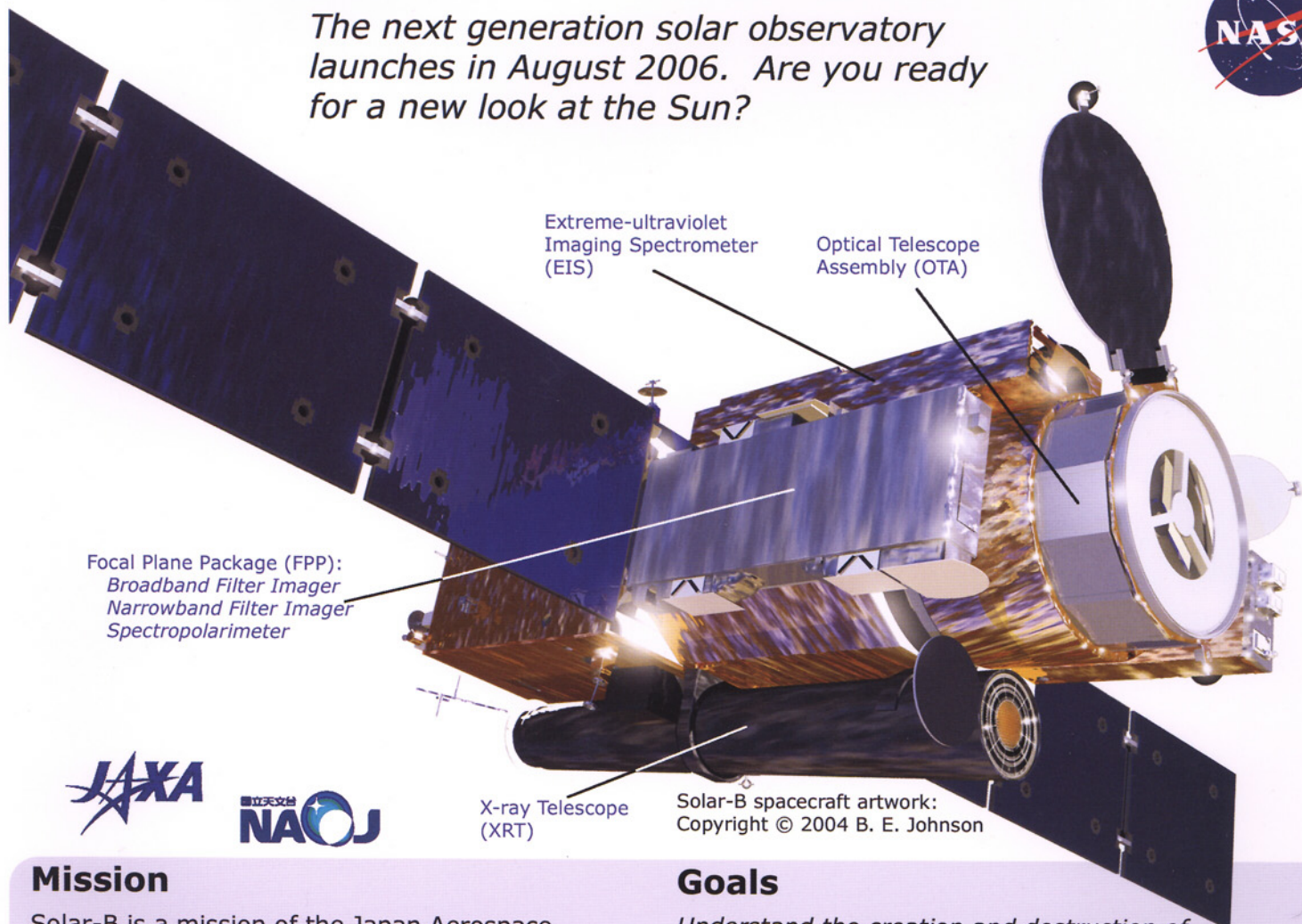


# countdown to launch!



The next generation solar observatory launches in August 2006. Are you ready for a new look at the Sun?



X-ray Telescope (XRT)

Solar-B spacecraft artwork:  
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## Mission

Solar-B is a mission of the Japan Aerospace Exploration Agency (JAXA) in collaboration with NASA and PPARC (United Kingdom). It follows the successful Yohkoh (Solar-A) mission.

Solar-B is scheduled to launch from Kagoshima, Japan in August 2006. It will ride an M-V rocket into a polar, Sun-synchronous orbit 600 kilometers above the Earth's surface, where it will spend three years almost continuously observing the Sun.

## Partners

### Spacecraft Mission Management

Japan Aerospace Exploration Agency (JAXA)

### Solar Optical Telescope (SOT)

Optical Telescope Assembly (OTA), instrument integration:  
National Astronomical Observatory Japan (NAOJ)

### Focal Plane Package (FPP):

Lockheed Martin Solar and Astrophysics Lab, NAOJ

### X-ray Telescope (XRT)

Telescope, filters, mechanisms, and instrument integration:  
Smithsonian Astrophysical Observatory (SAO), NAOJ

Camera and electronics: JAXA, NAOJ

### Extreme Ultraviolet Imaging Spectrometer (EIS)

Optics and mechanisms: U.S. Naval Research Laboratory, NAOJ  
Structure, camera, electronics, and instrument integration:  
UK Particle Physics and Astronomy Research Council, NAOJ

## Goals

*Understand the creation and destruction of the Sun's magnetic fields*

*Understand solar eruptions and the solar wind*

*Understand the variability of the Sun's luminosity*

*Understand the generation of ultraviolet and x-ray radiation*

## Spacecraft

Optical telescope: 0.5-meter diameter primary mirror  
Mass: 900 kg

Power: 1100 W (two single-axis solar arrays)

Telemetry: 4 Mbps for 10 minute playback,  
13-17 passes per day

Data Recorder: 8 Gbit (solid state)

Attitude: Skewed momentum wheel system

Stability: 1 arcsecond (spacecraft); 0.02 arcseconds  
over 10s through tip/tilt mirror (SOT)

Communication: X Band, S Band

NASA - [science.msfc.nasa.gov/ssl/pad/solar/solar-b.stm](http://science.msfc.nasa.gov/ssl/pad/solar/solar-b.stm)

JAXA - [www.jaxa.jp/missions/projects/sat/astronomy/solar\\_b/index\\_e.html](http://www.jaxa.jp/missions/projects/sat/astronomy/solar_b/index_e.html)

NAOJ - [solar.nro.nao.ac.jp/solar-b/index\\_e.html](http://solar.nro.nao.ac.jp/solar-b/index_e.html)

LMSAL - [fpp.lmsal.com/](http://fpp.lmsal.com/)

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