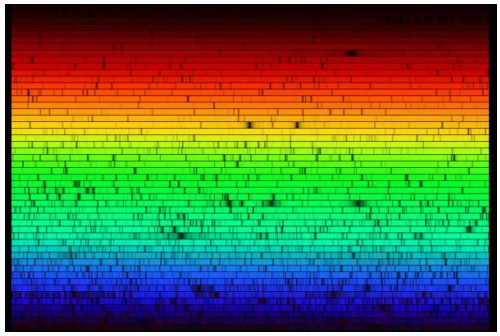


Solar Spectrum (APOD 4-23-2006)

National Student Solar Spectrograph Competition

Design, Build and Use a Ground-Based Solar Spectrograph

Sept. 2011 to May 2012

Register your team between February 1 and April 30, 2011 at http://spacegrant.montana.edu/IRIS.html

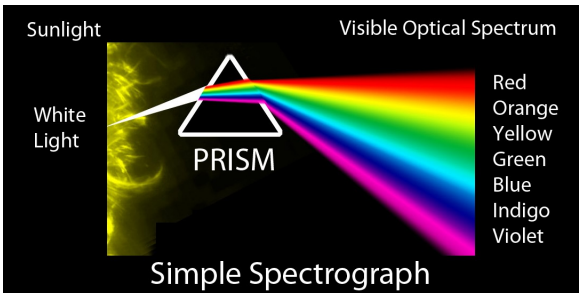
The National Student Solar Spectrograph Competition is MSGC's Education Program for NASA's Interface Region Imaging Spectrograph (IRIS) mission (see the back of this flyer for more info). Starting in 2011, the yearly competition will involve more than 28 undergraduate interdisciplinary teams from colleges and universities across the country. Both substantial scholarship prizes and travel prizes will be given in four categories: best design, best build, best science observations, and best presentation of results.

Competition Specifications and Team Tasks

- The project goal is to design and build a working ground-based solar spectrograph and demonstrate the capabilities of the spectrograph by making pre-defined observations of the solar spectrum.
- Demonstrate the resolution and sensitivity of the device by observing absorption lines in the visible spectrum and resolve as many lines as possible.
- Demonstrate an additional scientific capability of your spectrograph, e.g. measure line width.
- Can use a laptop for measurements.
- Typical teams have 3 to 6 students and must have a faculty advisor.
- Apply for funding of $2000.00/team for project materials. Priority for build funds will be given to MSIs, community colleges and institutions with less aerospace activity.

Competition held in Bozeman, MT - May 2012

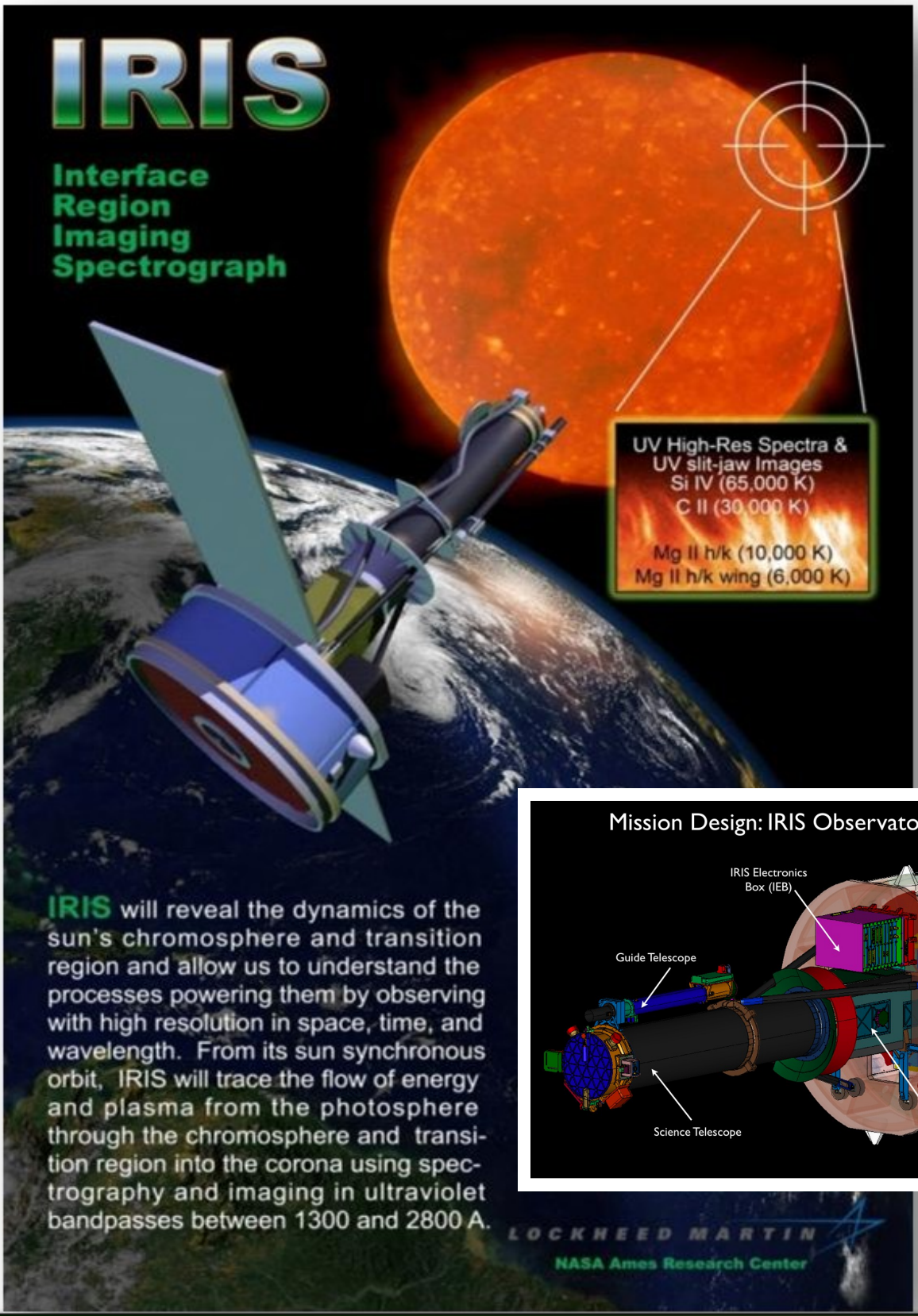
What is a Spectrograph?



A Spectrograph is an instrument used to measure properties of light over a specific portion of the electromagnetic spectrum by separating an incoming wave into a frequency spectrum. Spectrographs have a wide range of complexity from as simple as a prism to the cutting edge IRIS spectrograph.

IRIS

Interface Region Imaging Spectrograph



IRIS will reveal the dynamics of the sun's chromosphere and transition region and allow us to understand the processes powering them by observing with high resolution in space, time, and wavelength. From its sun synchronous orbit, IRIS will trace the flow of energy and plasma from the photosphere through the chromosphere and transition region into the corona using spectrography and imaging in ultraviolet bandpasses between 1300 and 2800 A.

LOCKHEED MARTIN

NASA Ames Research Center

"A SMall EXplorer mission to understand how the solar atmosphere is energized"

http://iris.lmsal.com/