

stereo - impact

education and public outreach

Mission

The principal objective of the Solar Terrestrial Relations Observatory (STEREO) is to understand the origin and consequences of Coronal Mass Ejections (CME's). CME's are the most energetic eruptions on the Sun. They are responsible for essentially all of the largest geomagnetic storms. In order to understand and forecast CME's, especially those traveling toward and past Earth, we need 3-Dimensional images of them and of the ambient solar corona and heliosphere. Achieving this perspective will require moving away from our customary Earth-bound lookout point. To provide the images for a stereo reconstruction of solar eruptions, one spacecraft will lead Earth and one will be lagging in its orbit about the Sun.

Key science objectives for the STEREO mission are to understand the mechanism and sites of solar energetic particle acceleration as well as how CME's propagate through and interact with the steady solar wind. Vital to understanding these objectives is the In-situ Measurements of Particles and CME Transients (IMPACT) suite of seven instruments. The IMPACT instruments will sample the distribution of solar wind plasma electrons, the characteristics of the solar energetic particle (SEP) ions and electrons, and the local vector magnetic field in all directions from the STEREO spacecraft. IMPACT is one of the STEREO mission's four measurement packages.

STEREO will be launched in the spring of 2006.

*Above left: A long pole (boom) as it will be extended in space from the STEREO satellite. IMPACT instruments located on the boom are kept at a safe distance from the satellite.



**The Center for
SCIENCE
EDUCATION**
at the UC Berkeley Space Sciences Laboratory



Education & Public Outreach

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- Teachers' guides
- Classroom testing



Professional Development Workshops

- Center for Science Education at UC Berkeley
- Regional and National Science Teacher Conferences



Underserved Audiences

- Solar Camp
- Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)



Interactive Installations

- STEREO sonification project: turning solar data into music
- Web page resources and content information



Diverse Partnerships

- Science centers (Exploratorium)
- Educators
- Scientists
- Musicians



Visit our websites: IMPACT education and outreach [<http://cse.ssl.berkeley.edu/impact>]
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