

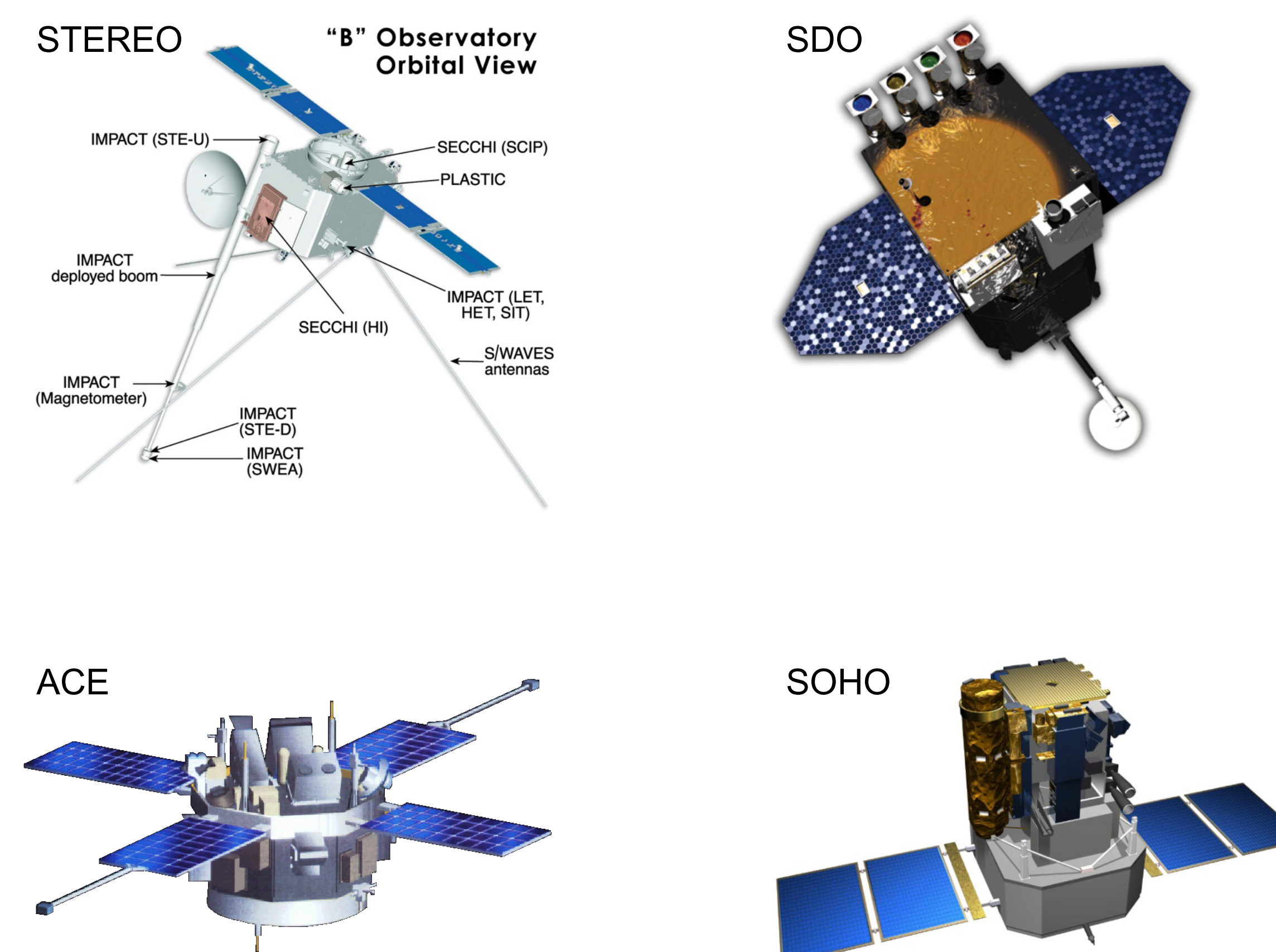
Real-Time Visualization Display Integrating STEREO, ACE, SOHO and SDO

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With Special Thanks to the STEREO/IMPACT, STEREO/PLASTIC, ACE/MAG, ACE/EPAM, ACE/SWEPAM, SOHO/LASCO, SDO/AIA, NOAA SWPC and STEREO SSC Teams for their Data and Plots

Integration of the Heliospheric Missions Gives a More Complete Understanding of Space Weather

- The STEREO spacecraft provide a unique opportunity when combined with the near-Earth perspective. We are able to get a more complete picture of the inner heliosphere than ever before.
- UC Berkeley has developed a real-time space weather web site utilizing real-time data from STEREO, ACE, SOHO and SDO.
- Particle data and visualizations (movies and images) are combined in an intuitive way to give an overview of current solar activity.
- Links to data and other real-time sites allows the user to investigate further, quickly and easily.
- Four different real-time pages are provided allowing for coverage across the particle energy spectrum from solar wind plasma to SEP energies.
- Alternative views emphasizing planetary science are also available.
- A real-time DST estimate provides another quick-look way of seeing what is happening. DST proxies at the two STEREO spacecraft are also being developed.

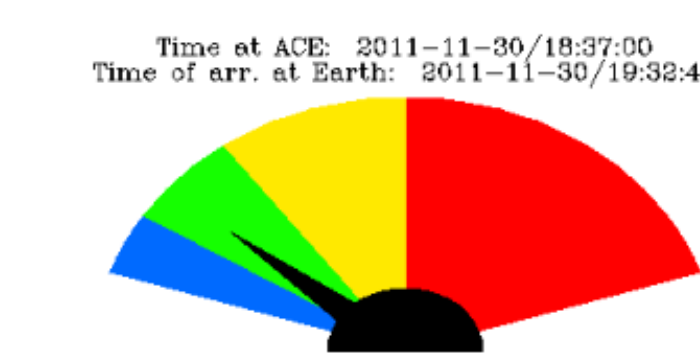


DST Estimator

http://sprg.ssl.berkeley.edu/dst_index/

Welcome to the Real Time Dst Estimate Web Page

Current Geo-Magnetic Storm Level Based on ACE Real Time Solar Wind Data



Please click on dial to see Geo-Magnetic Storm Level for today. The values are extrapolated using most recent solar wind and magnetic field data when data gaps are present.

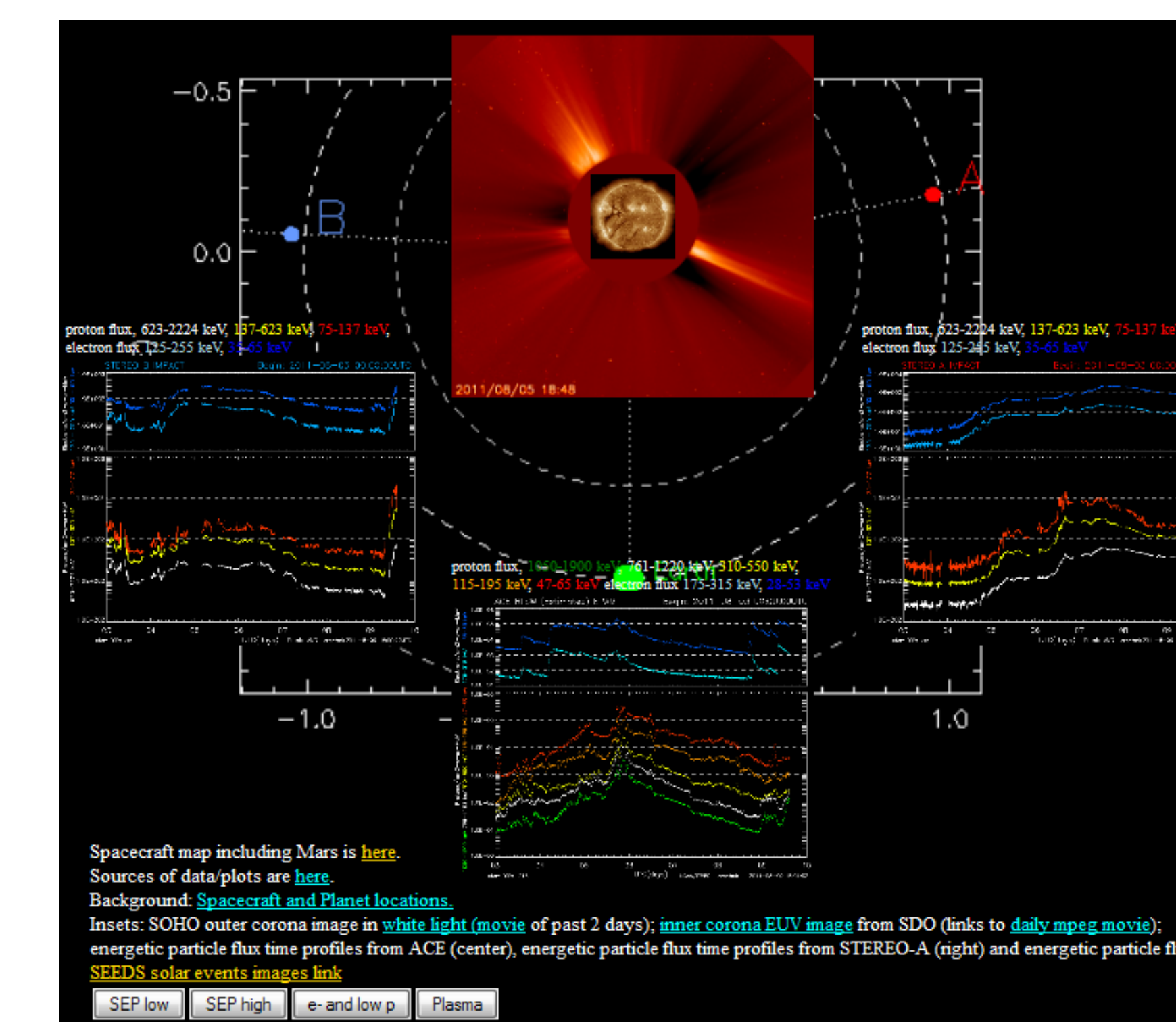
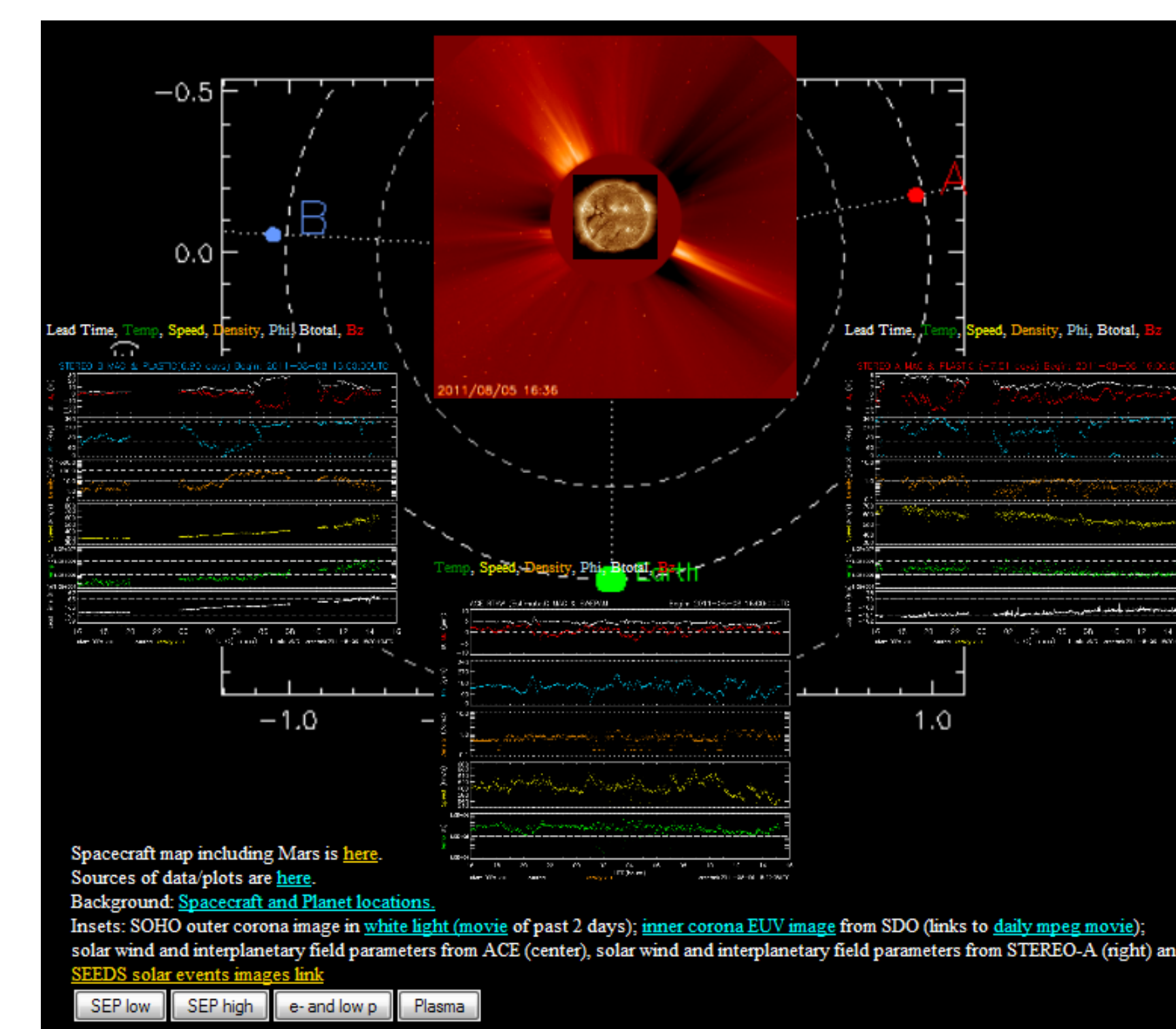
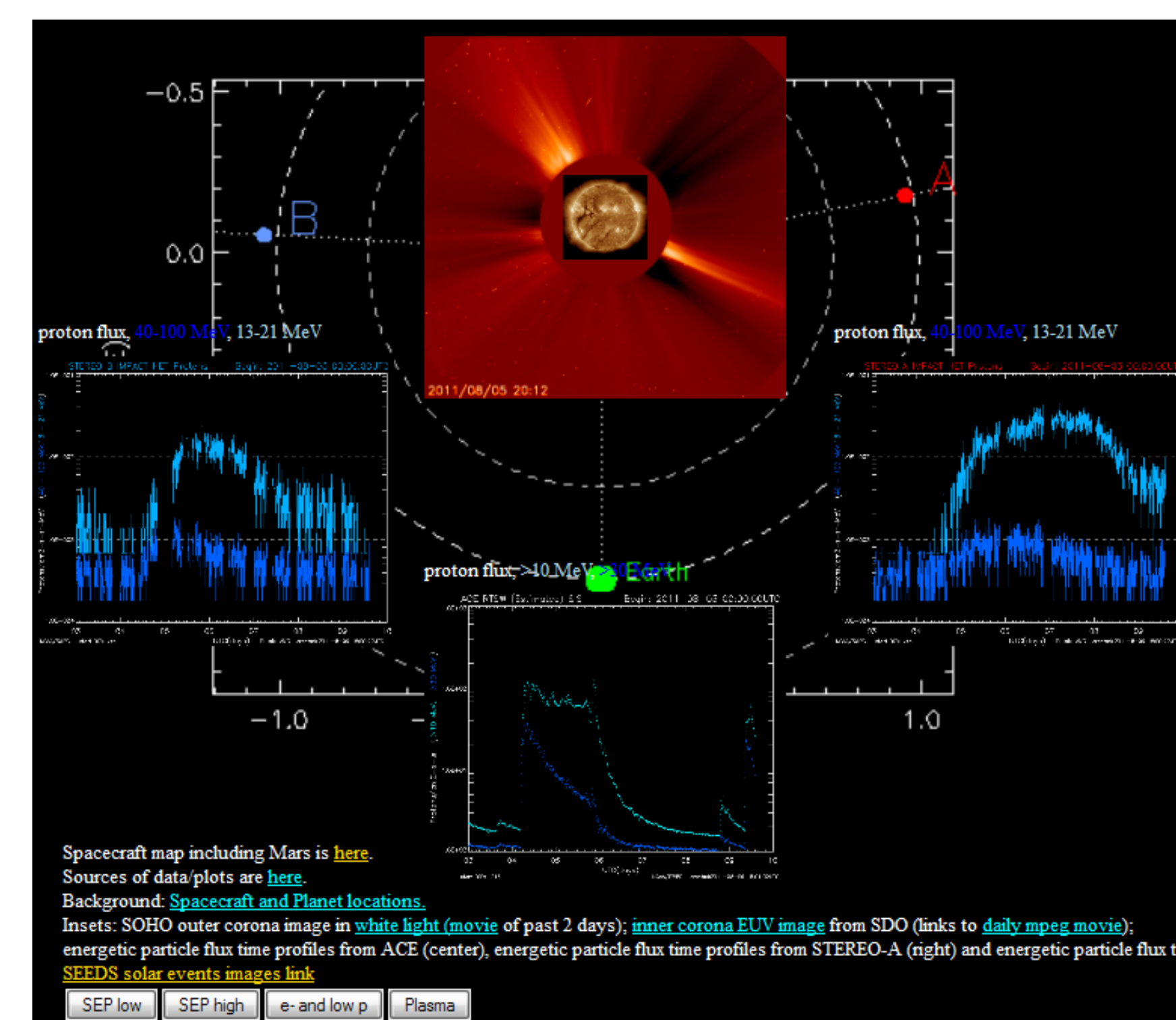
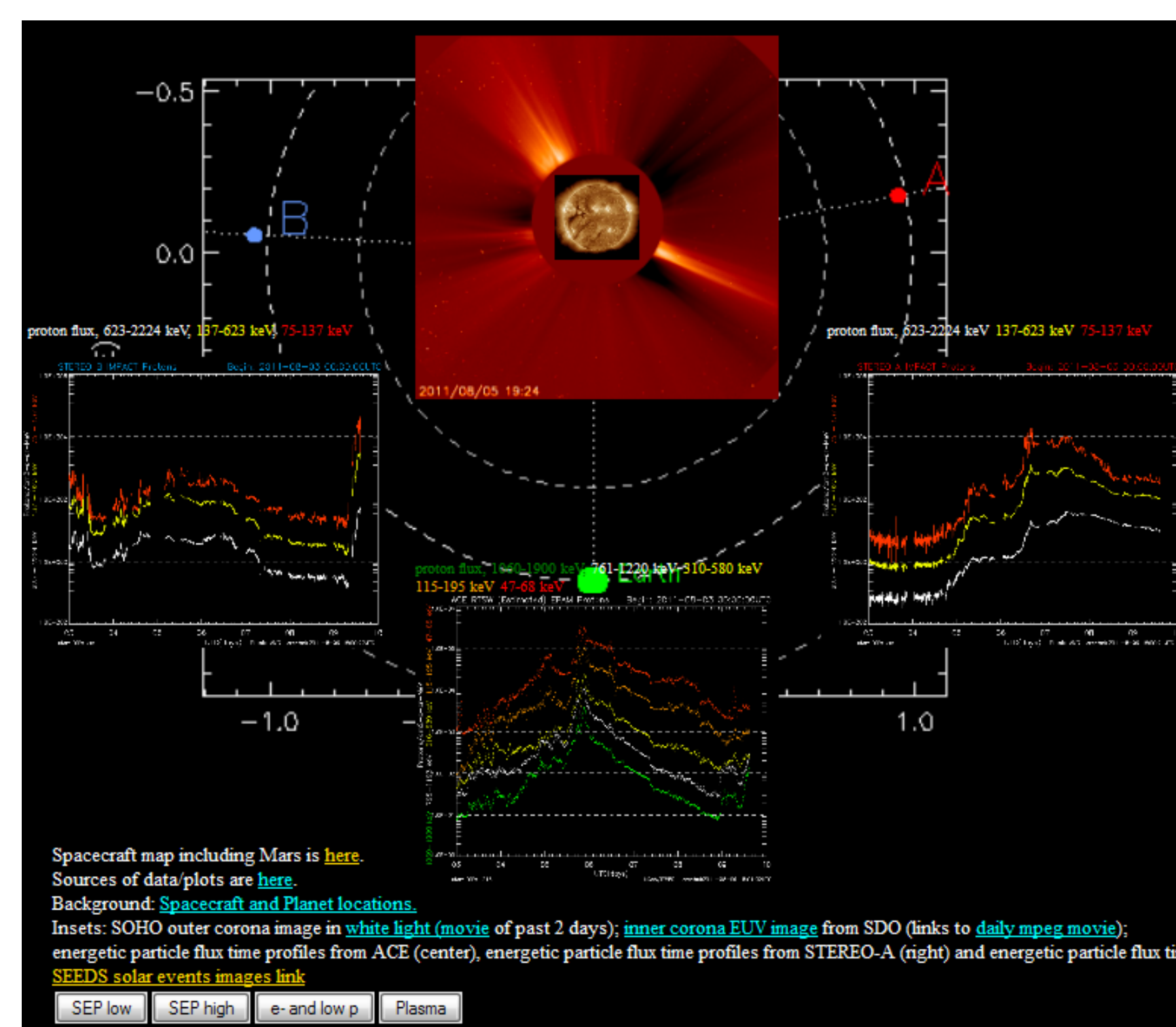
Time of ACE: 2011-11-26 18:07:00
Time of Earth: 2011-11-26 10:50:48

Low: Dst > -20 nT
Medium: -20 nT > Dst > -50 nT
High: -50 nT > Dst > -100 nT
Extreme: Dst < -100 nT

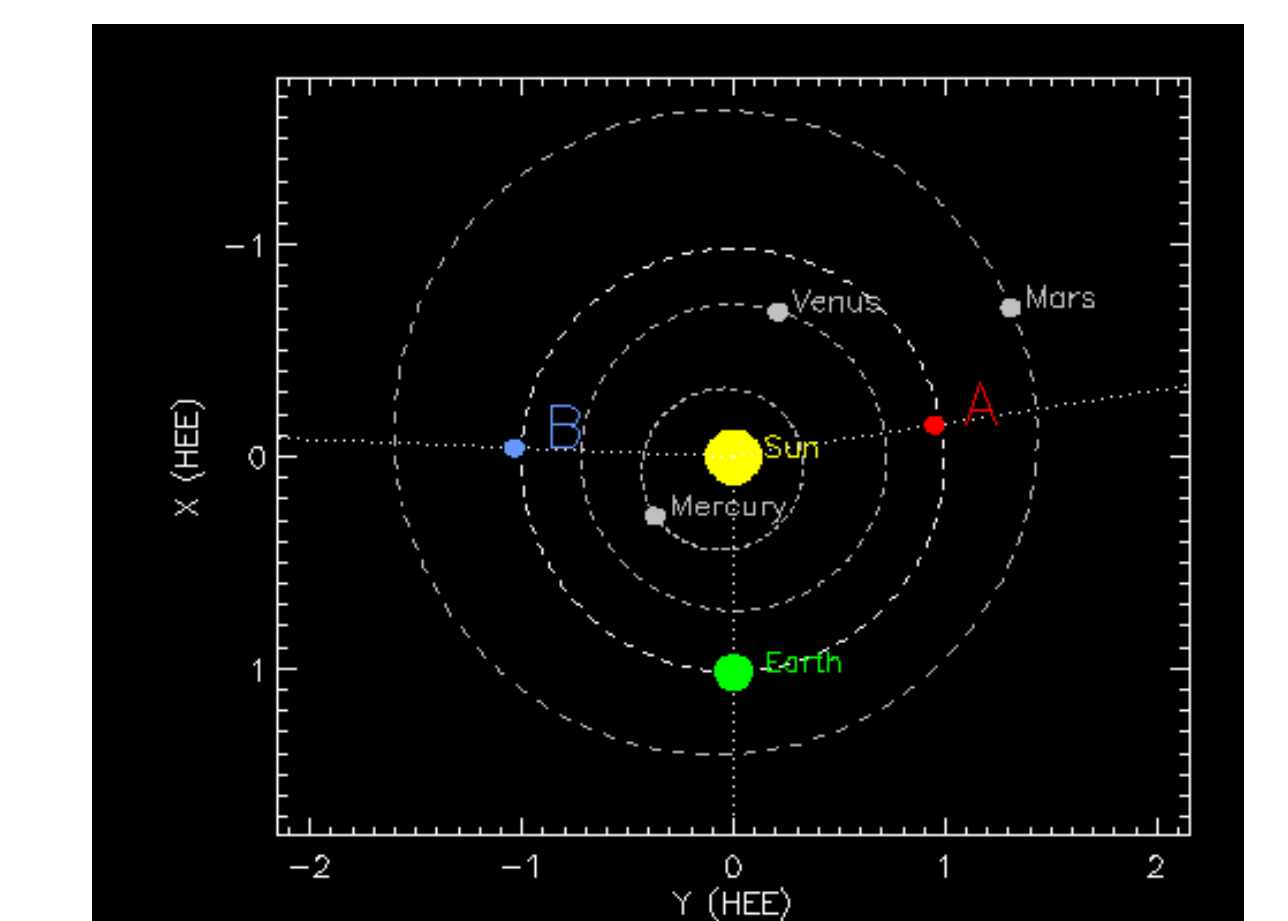
| What is the Dst index? | How is the Dst index estimated? | Real Time Dst estimates for last 96 hours |
|------------------------|---------------------------------|---|
| Space weather links | The Space Environment Center | SWPC for Geomag Storm Dst (Real-Time) |
| | ACE Real Time solar wind data | |

Our DST estimate page provides a quick way to assess current solar activity's impact at Earth using real-time data from the ACE spacecraft. We are also developing DST proxies at the STEREO spacecraft locations.

The New Real-Time Display <http://stereo.ssl.berkeley.edu/multistatus.php>

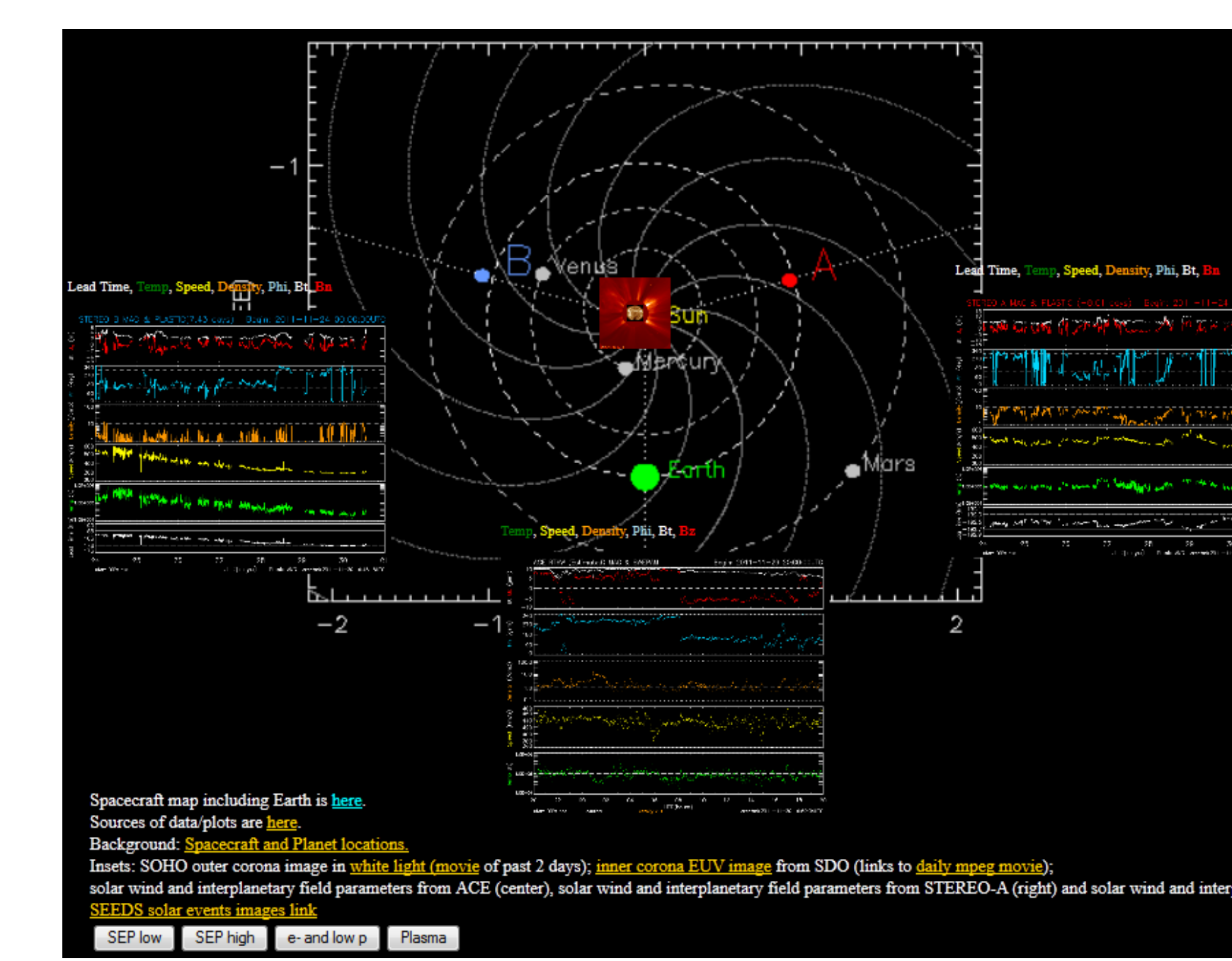
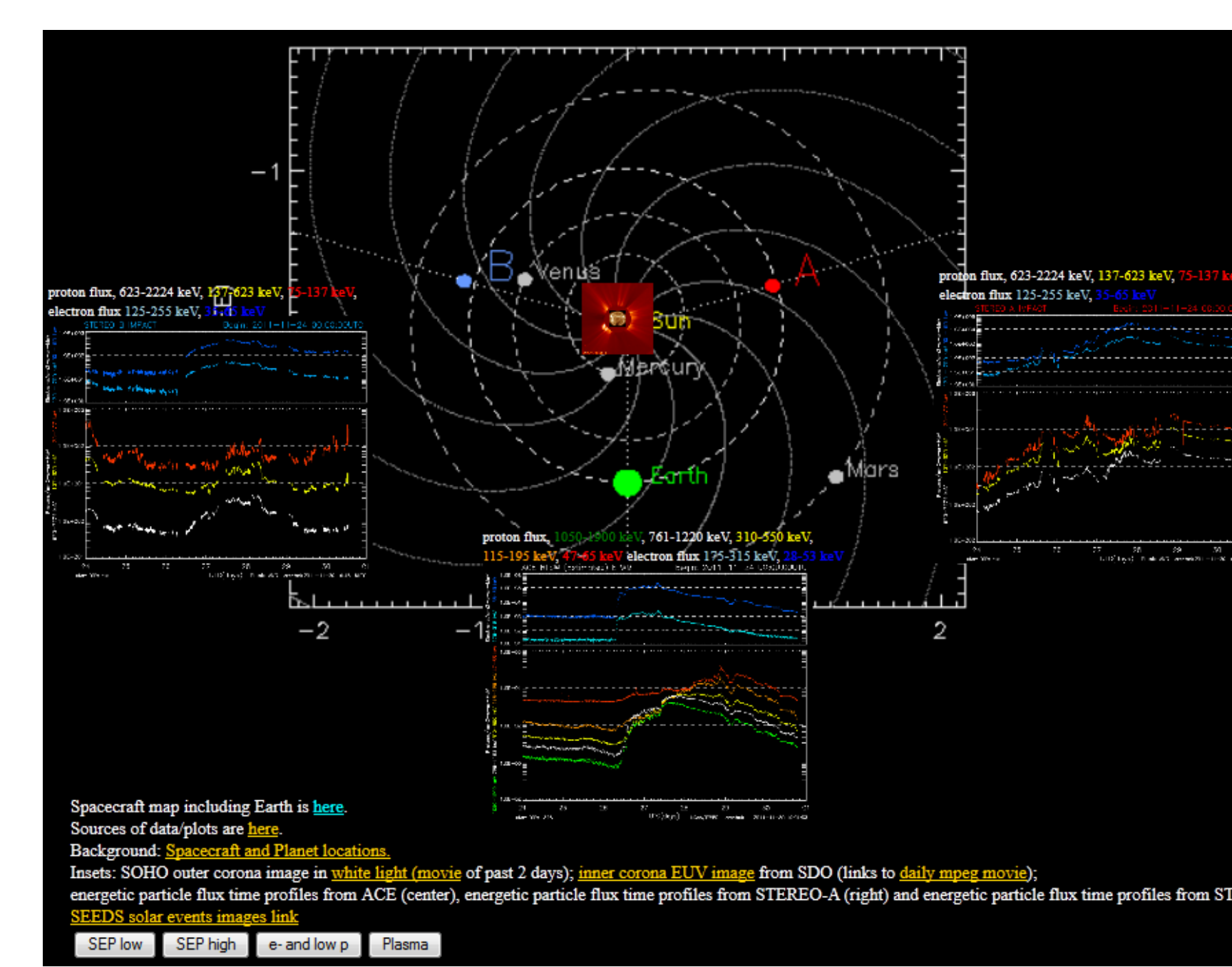
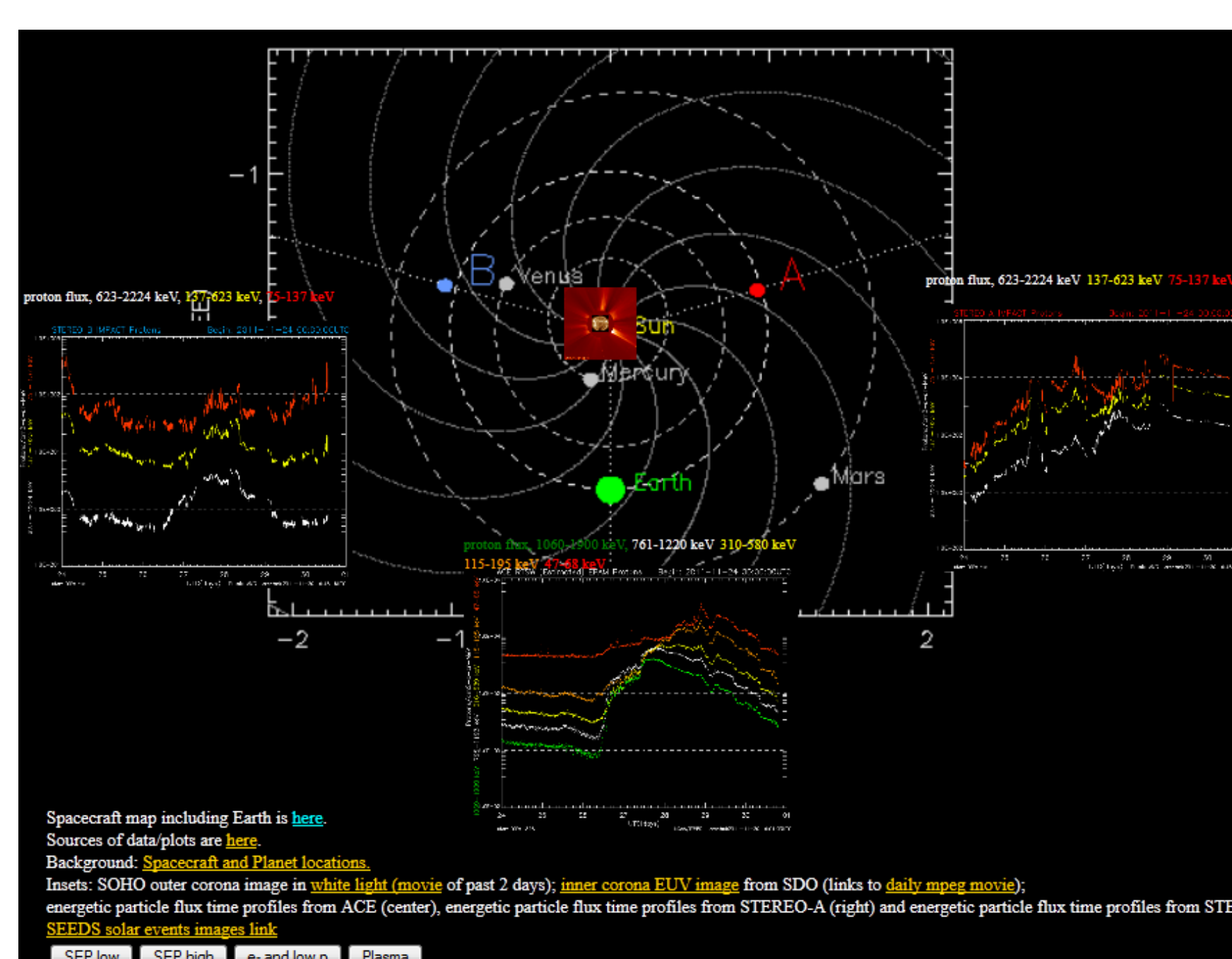
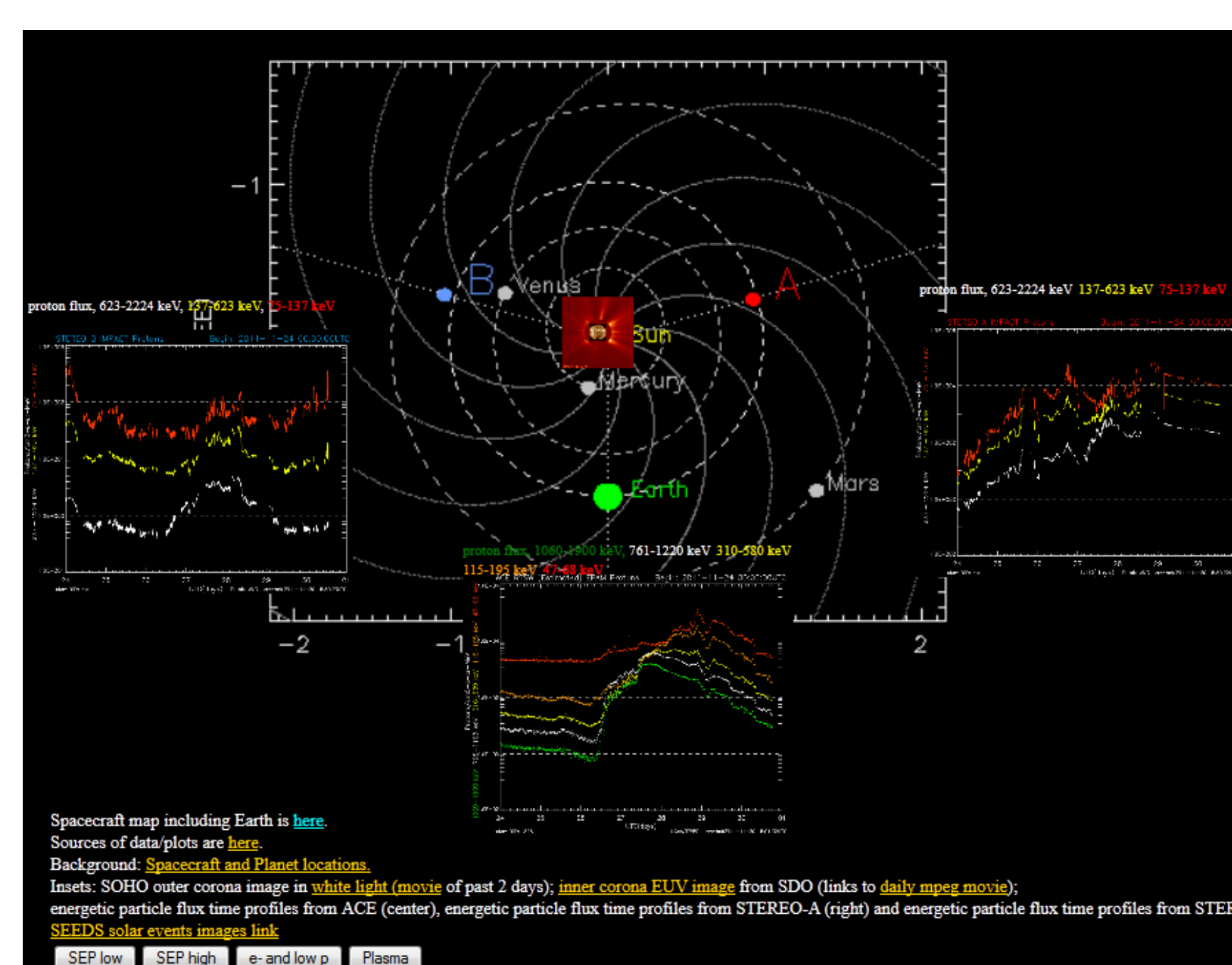


Current STEREO spacecraft separation now allowing for the full 360 degree view of the Sun when combined with near-Earth missions like SOHO.



Datasets displayed on the Berkeley Real-Time Site

STEREO/IMPACT MAG
STEREO/IMPACT HET
STEREO/IMPACT SEPT
STEREO/PLASTIC
ACE/MAG
ACE/EPAM
ACE/SWEPAM
(STEREO and ACE plots provided by the NOAA Space Weather Prediction Center)
SOHO LASCO C2
SDO AIA
STEREO spacecraft positions provided by the STEREO Science Center



Some examples of Berkeley's real-time web site in action. The top row images are examples of our original view primarily focused on the Sun-Earth, Sun-STEREO connection. The bottom row images are examples of our new planetary connections display. We hope these will be useful for understanding what may be seen by planetary missions. The SOHO LASCO C2 images are actually animated movies.