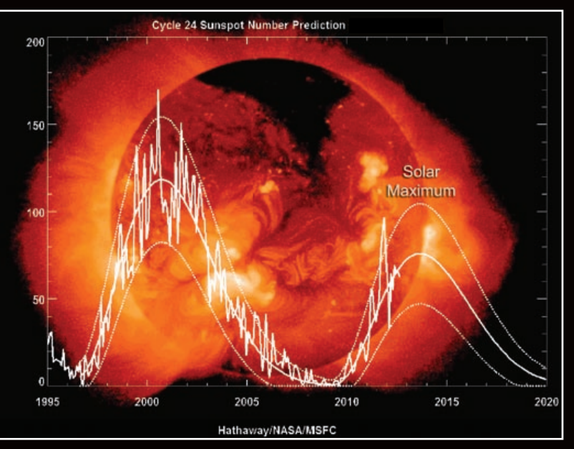


Tracking the previous and current solar cycle

Solar Maximum

The Sun goes through a cycle of activity about every 11 years, which is caused by the gradual reversal of its magnetic poles. These changes produce more tangled magnetic fields, more sunspots, and, thus, more solar storms. The maximum level of solar activity will likely occur in 2013. Scientists will not know when the peak has occurred until they see a general trend towards less activity. Solar activity is commonly measured by counting sunspots.

Follow Us Online!

It's easy to stay connected with NASA scientists, educators and Sun-Earth Day fans from around the globe:
Twitter: http://twitter.com/SunEarthDay
Facebook: http://www.facebook.com/user/SunEarthDay
YouTube: http://www.youtube.com/user/SunEarthDay
Podcasts: http://sunearth.gsfc.nasa.gov/podcasts/podrss.xml
Vodcasts: http://sunearthday.gsfc.nasa.gov/podcasts/vodrss.xml
Space Weather Media Viewer: http://sunearthday.nasa.gov/spaceweather

Space Weather Action Center

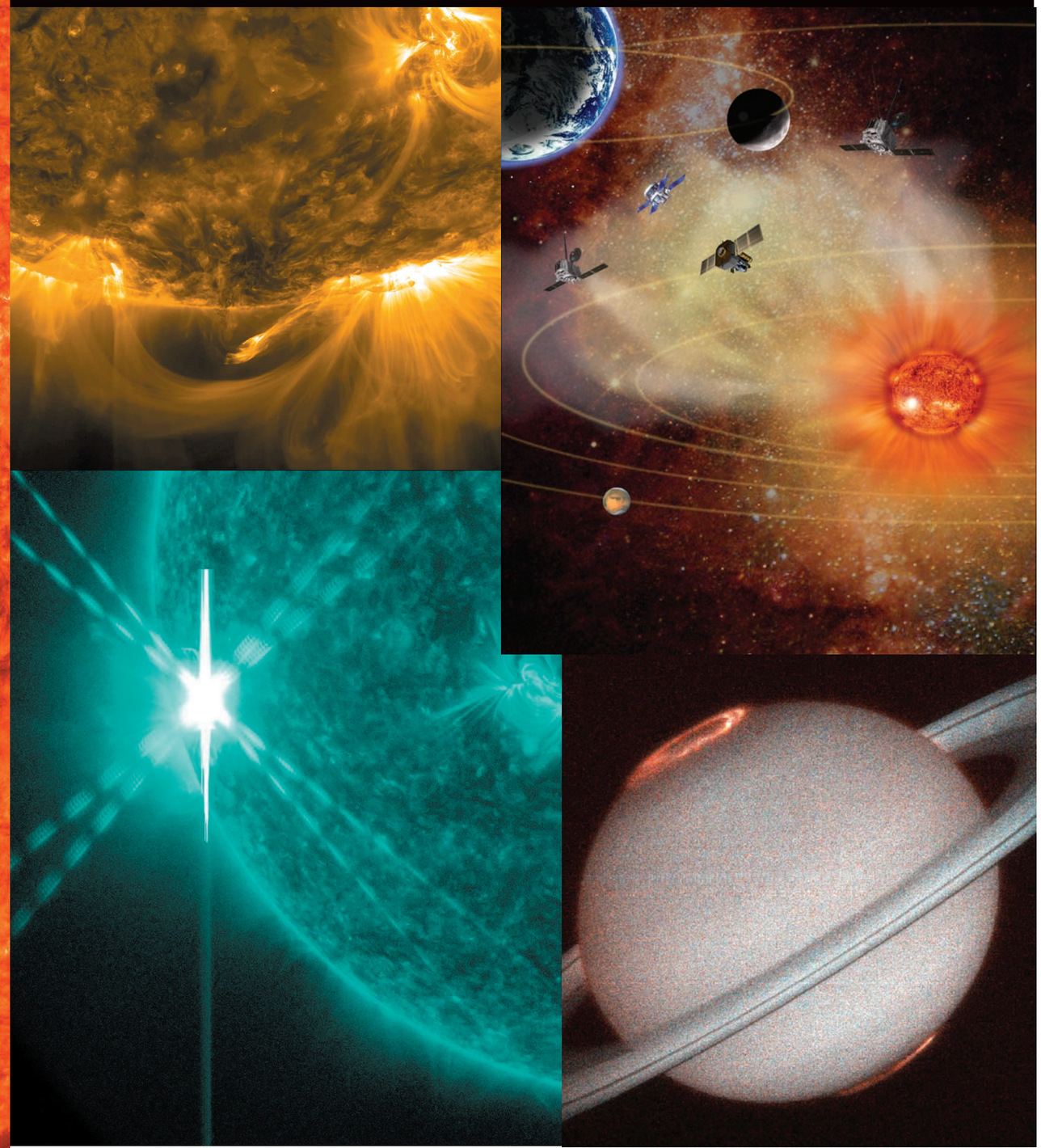
Imagine being able to monitor the progress of a solar storm from the time it erupts from our sun until it sweeps past Earth, effecting enormous changes in our magnetic field. Now imagine being able to do all of this from your classroom-based Space Weather Action Center (S.W.A.C.)! By following the basic steps in the Instructional Guide your class will soon be on its way to accessing, analyzing and recording NASA satellite and observatory data. You will also want to download the 'step-by-step' Educator's Setup Guide, where you will find instructions and diagrams on how to construct a fully functional SWAC inside your classroom while keeping limitations on classroom space and technology in mind.

Once established, your class will be ready to transform their journal data into real S.W.A.C. news reports! We've made this phase easy by providing an adaptable SWAC script! All they have to do is fill in the missing pieces based on the data collected in their student journals. In the Setup Guide we have suggested several inexpensive alternative methods by which you can produce multimedia Space Weather Action Reports.

Join us for the fun and excitement at **http://sunearthday.nasa.gov/swac**

What do these images show? (Clockwise starting with the upper left)

- Aurora at both poles of Saturn caused by the impact of a solar storm. (Credit: Hubble Space Telescope, StSci)
- A brilliant flare erupts and overwhelms imaging instruments, creating artificial streaks of light. Taken in extreme UV light. (Credit: SDO/NASA)
- Bright loops rise above active regions and connect with each other as well. The loops are actually particles tracing magnetic field lines seen in extreme UV light. (Credit: SDO/NASA)
- An illustration of a solar storm expanding into the solar system, affecting spacecraft and planets. (Credit: S.Hill, NASA)



www.nasa.gov

Sun-Earth Day 2013

Solar Max:

storm Warning--

Effects on the Solar System

National Aeronautics and Space Administration

NASA Apps

Here is a selection of some of most popular NASA Apps for exploring even more:

Astronomy Picture of the Day --
http://itunes.apple.com/us/app/astronomy-picture-of-the-day id304006512?mt=8
Developed in partnership with NASA, Astronomy Picture of the Day for the iPhone and iPad -- brings the vastness of space right into your hands.

NASA Space Weather Media Viewer http://venustransit.nasa.gov/2012/multimedia/apps.php
Connects to near-real time views of the Sun from multiple NASA satellites. Available for the iPhone, iPad and Droid!

3D Sun http://itunes.apple.com/us/app/3d-sun/id347089078?mt=8
A major solar flare erupts on the sun. Before long, your phone chirps in your pocket to let you know! You get the latest news of events and get to see a digital reconstruction of satellite images of the Sun freshly downloaded from NASA's "STEREO" satellites, orbiting millions of miles away.

SWx Monitor http://itunes.apple.com/us/app/nasa-space-weather/id422621403?mt=8
Provides access to space environment information from the sun to Earth, giving a look at complex physical processes as they evolve, and how they affect the near-earth space environment.

Solar Dynamics Observatory https://itunes.apple.com/us/app/sdo-iphone-version/id455184323?mt=8
App for seeing the latest images taken by the Solar Dynamics Observatory (SDO)

NASA Apps (continued)

LastShuttle Free http://itunes.apple.com/us/app/lastshuttlefree/id476676494?mt=8
Once more a time to save our planet has come; once more we are threatened by the forces of the universe. Hours of entertainment in six exciting levels.

Spacecraft 3D http://itunes.apple.com/us/app/spacecraft-3d/id541089908?mt=8
An augmented reality (AR) app that lets you learn about and interact with spacecraft used to explore our solar system, study Earth, and observe the universe. Using a printed AR Target and the camera on your mobile device, you can get up close with these robotic explorers, see how they move.

NASA Science: A JOURNEY of Discovery
http://itunes.apple.com/us/app/nasa-science-journey-discovery/id541482963?mt=8
NASA leads the nation on a great journey of discovery, seeking new knowledge and understanding of our planet Earth, our Sun and Solar System. Brings the latest mission information from NASA's Science Mission directorate.

Space Images http://itunes.apple.com/us/app/space-images/id347075764?mt=8
Discover stunning images and videos of space, stars and planets -- including Earth and the sun! -- at your fingertips. Offers a unique view of the sky via hundreds of images taken by spacecraft studying planets, stars, galaxies, weather on Earth and more.

You can scan this QR code with a smart phone to go directly to the Sun-Earth Day apps page or type in this URL:

http://sunearthday.nasa.gov/2013/multimedia/apps.php

NP-2012-(333)-GSFC