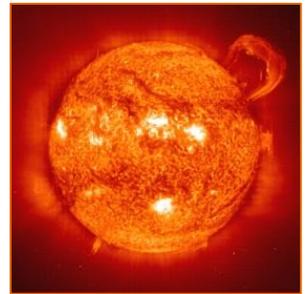


NOAA's Space Weather Prediction Center Education & Outreach Resources



- **Space Weather: Storms from the Sun Booklet by NOAA**
 - Provides an introduction to space weather and how it impacts our Nation's infrastructure.
 - http://www.swpc.noaa.gov/sites/default/files/images/u33/swx_booklet.pdf
- **Space Weather and its Impacts Poster by NOAA**
 - Presents what space weather is and the multitude of customers impacted.
 - http://www.swpc.noaa.gov/sites/default/files/images/u33/swx_poster_twosided.pdf
- **Space Weather as a NOAA Resource Collection**
 - Offers space weather background information, multimedia resources, lessons & activities, real world data, and career profiles.
 - http://www.education.noaa.gov/Weather_and_Atmosphere/Space_Weather.html

- **NOAA Space Weather Scales**
 - Communicates space weather conditions and their possible effects on people and systems. Describes solar disturbances, how often events happen, intensity levels, and outlines the impacts on infrastructure.
 - <http://www.swpc.noaa.gov/noaa-scales-explanation>

The screenshot shows the NOAA Education Resources website. The top navigation bar includes 'Home', 'Education Programs', 'About This Site', 'Contact Us', 'Feedback', 'Search', and 'Log Out'. The main content area is titled 'Space Weather' and features a video player with the text 'Did you know that outer space has weather too? Not rain or snow but winds and magnetic waves that move through space!'. Below the video is a table titled 'NOAA Space Weather Scales'.

Geomagnetic Storms		Frequency	Impact
G5	Extreme	1 per 11 years	Major power outages, satellite damage, aurora visible at mid-latitudes
G4	Severe	1 per 2.2 years	Minor power outages, satellite damage, aurora visible at high latitudes
G3	Strong	1 per 1.1 years	Minor power outages, satellite damage, aurora visible at high latitudes
G2	Minor	1 per 0.55 years	Minor power outages, satellite damage, aurora visible at high latitudes
G1	Weak	1 per 0.29 years	Minor power outages, satellite damage, aurora visible at high latitudes

- **“An Introduction to Space Weather and the Space Weather Prediction Center” Video developed by NOAA Weather Partners**
 - Provides an introduction to space weather and how it impacts our Nation's infrastructure.
 - <https://www.youtube.com/watch?v=JncTCE2NWgc&list=PLBdd8cMH5jFmVVR2sZubiUzBO6JI0Pvx0&index=1>
- **“Space Weather Impacts: Power” Video developed by NOAA Weather Partners**
 - Explains how geomagnetic storms can create electrical currents that can result in significant impacts on the electric power grid.
 - <https://www.youtube.com/watch?v=caHYgTf6tO8&index=4&list=PLBdd8cMH5jFmVVR2sZubiUzBO6JI0Pvx0>
- **“Space Weather Impacts: GPS” Video developed by NOAA Weather Partners**
 - Outlines how space weather storms can impact not only navigational services provided by GPS, but high accuracy timing as well.
 - <https://www.youtube.com/watch?v=V4rSC6Hje0E&list=PLBdd8cMH5jFmVVR2sZubiUzBO6JI0Pvx0&index=3>
- **“Space Weather Impacts: Communications” Video developed by NOAA Weather Partners**
 - Presents different forms of communication and how these technologies can experience significant degradation due to space weather storms.
 - https://www.youtube.com/watch?v=7vFGTI_Cp6I&index=2&list=PLBdd8cMH5jFmVVR2sZubiUzBO6JI0Pvx0

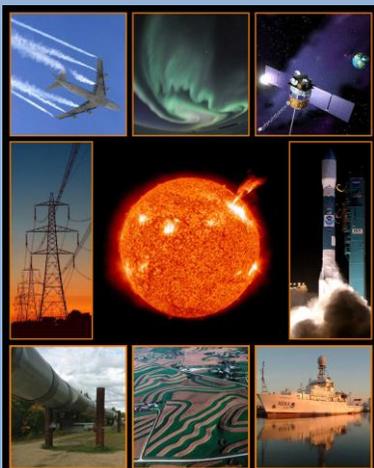
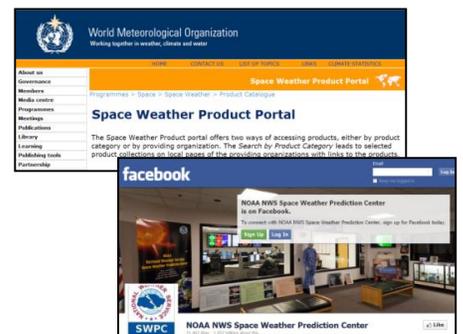
- **“Space Weather Impacts on Aviation” Training Module developed by COMET**
 - Provides an overview of the information and products available from NOAA’s SWPC in support of aviation. Offers practice interpreting and using those products for decision support during space weather events.
 - https://www.meted.ucar.edu/training_module.php?id=963



- **“Space Weather Basics, 2nd Edition” Training Module developed by COMET**
 - Presents an overview of space weather processes, their impacts on Earth and human activities, and the technologies used for forecasting space weather events.
 - https://www.meted.ucar.edu/training_module.php?id=901
- **“Space Weather and General Aviation” Video developed by the Aircraft Owners and Pilots Association (AOPA)**
 - Presents space weather issues faced by general aviation to increase situational awareness. AOPA represents nearly 400,000 members who are private aviators.
 - http://www.aopa.org/aopalive/?watch=xpcThzNDpBAIUrlzVhf1zrXDAaV_cu54

- **World Meteorological Organization Space Weather Product Portal**
 - Offers one stop shopping to access space weather products from around the globe at no cost. This portal facilitates intercomparison and coordination of products and also enhances global participation in space weather services.
 - http://www.wmo.int/pages/prog/sat/spaceweather-productportal_en.php

- **Social Media – The Space Weather Prediction Center**
 - **Facebook** <http://www.facebook.com/pages/NOAA-NWS-Space-Weather-Prediction-Center/232532740131296>
 - **Youtube** Monitoring Space Weather – Introduction <http://www.youtube.com/watch?v=OcvakCS7bD0&feature=youtu.be>



Sign up for email alerts, warnings, watches and more:
<http://www.swpc.noaa.gov/content/subscription-services>

NOAA’s Space Weather Prediction Center
 325 Broadway Avenue
 Boulder, CO 80305

For more information, please visit us at www.swpc.noaa.gov