NASA's Solar Dynamics Observatory captured this image of a solar flare—as seen in the bright flash in the upper right portion of the image—on April 30, 2022. The image shows a subset of extreme ultraviolet light that highlights the extremely hot material in flares and which is colorized in red. Credit: NASA/SDO

The sun emitted a strong solar flare on April 30, 2022, peaking at 9:47 a.m. EDT. NASA's Solar Dynamics Observatory, which watches the sun constantly, captured an image of the event.

Solar flares are powerful bursts of energy. Flares and solar eruptions can impact radio communications, electric power grids, navigation signals, and pose risks to spacecraft and astronauts.

This flare is classified as an X-class flare. X-class denotes the most intense flares, while the number provides more information about its strength.

More information: More info on how flares are classified can be found here: www.swpc.noaa.gov/phenomena/solar-erosion-solar-blackouts

NASA observes the sun and our space environment constantly with a fleet of spacecraft that study everything from the sun's activity to the solar atmosphere, and to the particles and magnetic fields in the space surrounding Earth.

The Solar Dynamics Observatory is the first mission to be launched for NASA's Living With a Star (LWS) Program, a program designed to understand the causes of solar variability and its impacts on Earth. SDO is designed to help us understand the sun's influence on Earth and Near-Earth space by studying the solar atmosphere on small scales of space and time and in many wavelengths simultaneously.

Provided by NASA's Goddard Space Flight Center