

Solar flares keep getting stronger

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The sun is a tempestuous mistress - and her outbursts are becoming more and more violent as the weeks go on.

NASA's Solar Dynamics Observatory spotted the summer's first 'X' solar flare on Friday - a huge outburst from the sun right at the top of the scale.

This came on the back of 12 'M' flares in just six days, with a M6.1 flare knocking out radio signals across the planet on Thursday - hinting at the destruction the sun could reign on our technology if Earth takes a full blast across its blow.

The sunspot group behind the flares - named as AR1515 - stretches across 118,681 miles (191,000km) of the sun's surface.

This makes it's width more than 15 Earths set end to end, said NASA solar astrophysicist C. Alex Young.

The biggest flares are known as 'X-class flares' based on a classification system that divides solar flares according to their strength.

The smallest ones are A-class, which are similar to normal background levels, followed by B, C, M and X.

Similar to the Richter scale for earthquakes, each letter represents a 10-fold increase in energy output, meaning an X is ten times an M and 100 times a C.

The sun is now heading into the peak of its 11-year solar flare cycle, with 2013 expected to be the tumultuous year.

With the increased spread in communications in the last 11 years, a severe solar storm could cause huge issues for the planet.

Radio blackouts occur when the X-rays or extreme UV light from a flare disturb the layer of Earth's atmosphere known as the ionosphere, through which radio waves travel.

The constant changes in the ionosphere change the paths of the radio waves as they move, thus degrading the information they carry.

This affects both high and low frequency radio waves alike.

The same region has also produced numerous coronal mass ejections or CMEs. They have been observed and modeled by NASA's Space Weather Center (SWC) and are thought to be moving relatively slowly, traveling between 300 and 600 miles per second.

Since the active region itself is so southerly in the sun, CMEs from this region are generally unlikely to impact Earth.