

## Image: Restless star makes for stunning storm

February 22 2019

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Credit: Ollie Taylor

Geomagnetic activity caused by our star recently created a stir in the skies over Iceland, resulting in the seeming electrification of the night, as captured here by photographer Ollie Taylor.

Unpredictable and temperamental, our Sun blasts intense radiation and

colossal amounts of energetic material in every direction, creating the ever-changing conditions in space known as 'space weather'.

The [solar wind](#) is a constant stream of electrons, protons and stripped-down atoms emitted by the Sun, while [coronal mass ejections](#) are the Sun's periodic outbursts of colossal clouds of solar plasma. These events disturb Earth's protective magnetic field, creating [geomagnetic storms](#) at our planet.

Solar events can seriously interfere with infrastructure on Earth and in space, and pose a radiation threat to future explorers of the Moon and Mars. It is thought that a solar storm today on the scale of the Carrington event of 1859 would cause billions of euros of damage, by disturbing satellite systems, power grids, radio communications and all social and commercial services depending on these critical elements of our infrastructure.

While [solar events](#) can't be prevented, advance warning can give operators time to act to protect critical infrastructure. ESA's planned Lagrange mission to monitor the Sun will do just that, by feeding data into the European Space Weather Service Network and enabling accurate and reliable space weather forecasts.

For more of Ollie's wonderful photography, visit his website [here](#).

Provided by European Space Agency

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