

Solar storm could cause internet apocalypse

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In news- A research paper presented at the ACM SIGCOMM 2021 Conference recently noted that a powerful solar storm can cause an internet apocalypse, damage submarine cables and communication satellites.

About solar storm-

- A solar storm or a **Coronal Mass Ejection**, is an **ejection of highly magnetised particles from the sun**.
- These particles can travel several million km per hour and can take about 13 hours to five days to reach Earth.
- These eruptions, which comprise **flares, prominences, sunspots** can overwhelm the Earth's atmosphere if they occur in sufficiently large quantities.
- The harmful particles of the solar storm can produce their own magnetic fields, which could **modify the Earth's magnetic field and affect compass readings**.
- It could also dump particles in the Earth's atmosphere that **can cause an Aurora on the earth**, like the Northern Lights.
- It could also produce **massive electrical surges in power grids and induce electricity in long pipelines**.
- The **first recorded solar storm occurred in 1859** known as the **Carrington Event**, that led to compasses going haywire globally, while the Aurora Borealis were seen in Colombia, which falls near the equator.
- The new research has mentioned that a '**Internet shutdown strategy**' can help minimise the connectivity loss during and after a solar storm impact.
- Modelling studies to understand how connectivity will be affected country-scale showed that **the countries in the lower latitudes are at a much lower risk**.