

Solar shooting stars

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About Solar shooting stars:

- These are massive **clumps of plasma** that plummet to the Sun's surface at incredible speeds.
- These look like a massive rain of fireballs that play a **key role in heating up the corona** which is the outermost part of the Sun's atmosphere.
- The researchers observed these solar shooting stars using the **Solar Orbiter spacecraft** of the **European Space Agency**.
- This is the first time such impacts have been spotted.
- These observations were made from a close distance of just 30 million miles from the sun.

How are coronal rains formed on Sun?

- The Coronal rain which is plasma firework displays consisting of gas with temperatures exceeding two million degrees Fahrenheit.

- Instead of water, **coronal rains form when localised temperature drops**, causing solar plasma to condense into dense lumps.
- These lumps then fall to the cooler surface of the Sun, known as the photosphere, as fiery rain at speeds of up to 220,000 miles per hour.

Significance of this observation

- This could help solve the mystery of why the corona, the outermost part of the Sun's atmosphere, is hotter than the layers beneath it.

Q1) What is the Sun's corona?

The Sun's corona is the outermost layer of its atmosphere, extending millions of kilometers into space. It is a region of extremely hot and ionized gases that surround the Sun.

Source: [Solar shooting stars: Scientists left stunned by 'rain of fireballs' on Sun](#)

Source: <https://vajiramandravi.com/current-affairs/solar-shooting-stars/>

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