Simultaneous Eruption of Solar Flares

Source: IE

Recently, the **National Aeronautics and Space Administration (NASA)** solar dynamics observatory captured a rare celestial event that occurred with **four solar flares erupting simultaneously.**

- It originated from **three** sunspots **and a large magnetic filament**, demonstrating complex magnetic interactions.
- When the sun reaches the peak of its 11-year solar cycle known as solar maximum, it exhibits heightened activity.
    - It is known as a **sympathetic** solar flare, where multiple eruptions occur across the Sun's magnetic field, linked by massive magnetic field loops.
- **Sympathetic flares** are caused by **one eruption triggering others,** leading to **Coronal Mass Ejections (CMEs)** and massive bursts of plasma.
- It is considered **rare** because most reported sympathetic flares involve only two linked flares, while this one involved **four flares** erupting in unison making it a super-sympathetic event.
- These types of events have the **potential to disrupt power grids, telecommunication networks on Earth,** and orbiting satellites, and expose astronauts to dangerous radiation levels.
- This event offers scientists an opportunity to understand the **Sun's complex life cycle** and magnetic interactions better.
- The **sun's magnetic field goes through a cycle,** called the solar cycle, every 11 years the Sun's magnetic field completely flips which means the **sun's north and south poles switch places.**

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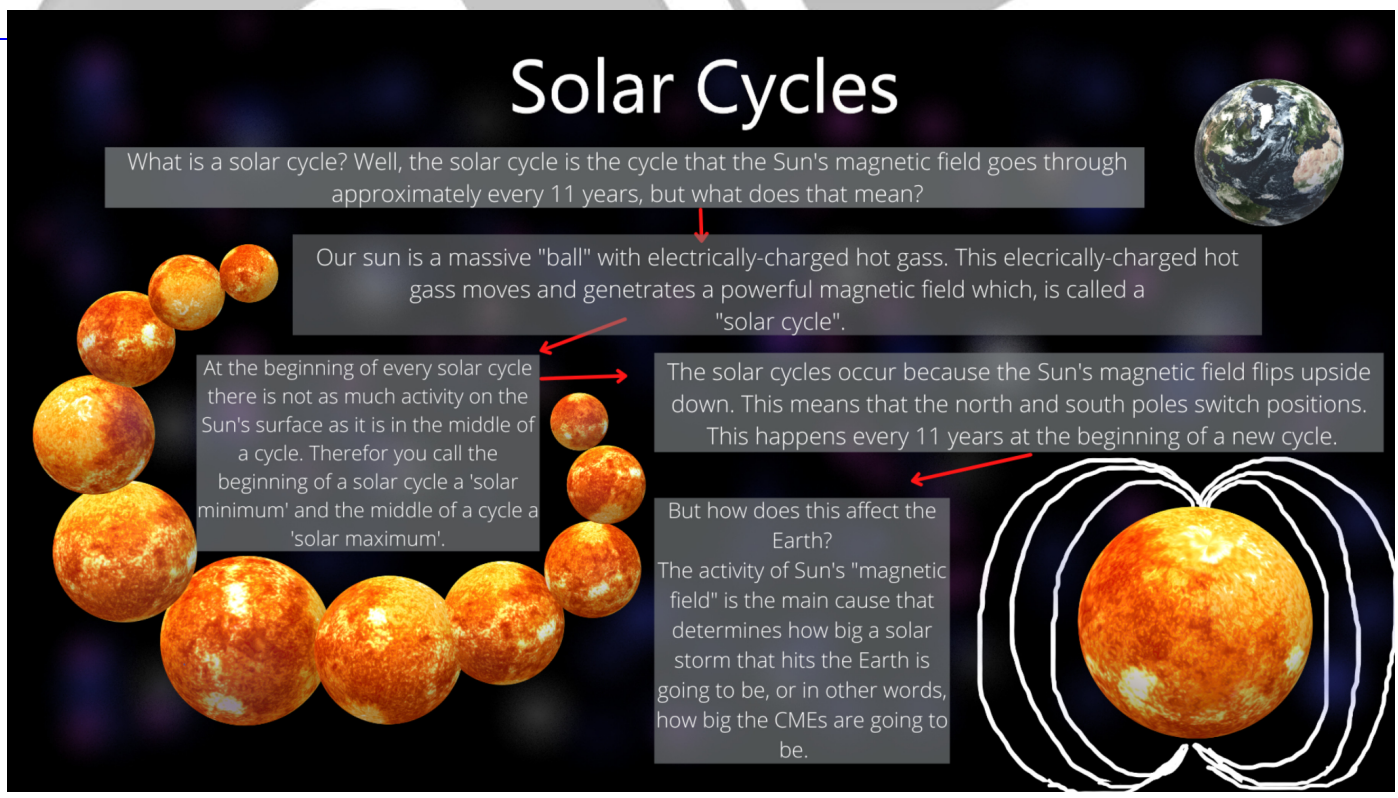

Read more: Solar Radiation Management