A Solar Storm Timeline

Scientists using the NASA's IMAGE satellite have been studying how the Earth's environment changes during a solar storm. This environment is filled with invisible clouds of gas. It is a bit of a mystery how these clouds are created by solar storms which pass by Earth.

This activity uses satellite data to study a solar storm and its impact on Earth's environment in space.

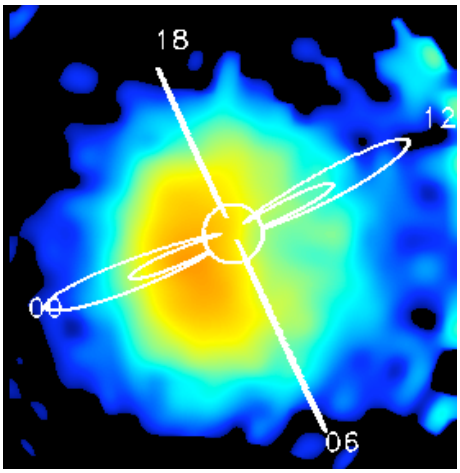

IMAGE spots a plasma storm near Earth.

Scientists construct a timeline to investigate how natural phenomena change in time. This is often the first step in identifying their causes.

- Drawing conclusions from

Now you try!

Here's how to do it!

15:21 A solar flare erupts on the Sun
15:30 A disturbance is detected on Earth
How many minutes later was the Earth disturbance witnessed after the flare erupted?

15hours 30minutes
- 15hours 21minutes
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9 minutes later.

Solar Storm Timeline

Day	*Time*	*What Happened*
Tuesday	4:50 PM	Gas eruption on Sun
Thursday	3:36 AM	Plasma storm reaches Earth.
Thursday	5:20 AM	Storm at maximum intensity.
Thursday	5:35 AM	Auroral power at maximum.
Thursday	11:29 AM	Aurora power at minimum.
Thursday	2:45 PM	Space conditions normal

1) How much time passed between the solar gas eruption and its detection near Earth?

2) How long after the plasma storm reached Earth did the aurora reach their maximum power?

3) How long did the storm last near Earth from the time the plasma was detected, to the time when space conditions returned to normal?

- **Extra for Experts!**

If the Earth is 150 million kilometers from the sun, how fast did the storm travel from the Sun in kilometers per hour?

Space Weather: http://image.gsfc.nasa.gov/poetry/weather01.html