

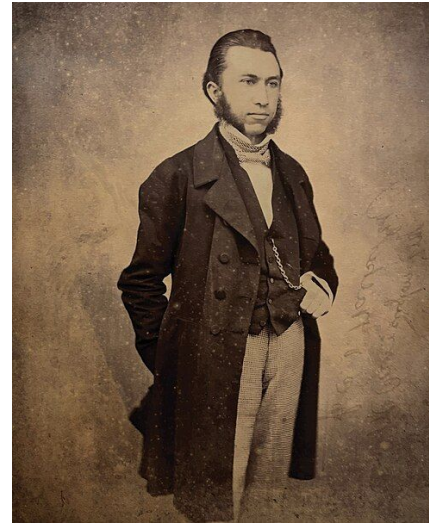
WEDNESDAY 2ND SEPTEMBER

On the morning of 1st September 1859, astronomer Richard Carrington (pictured) was observing the sun from his observatory in Redhill, Surrey when he saw two bright flashes from the sun.

17 hours later on 2nd September the electrically charged particles (mainly protons and electrons) that were emitted by that solar flare reached Earth. Across Europe and America telegraph lines sparked, operators received electric shocks and even when disconnected from their batteries some wires continued to send messages.

Charged particles are emitted from the sun all the time and we are largely protected from their effects by the Earth's magnetic field. We can see their effect in the aurora at the poles. 'The Carrington Event' as the 1859 event came to be known was the largest **geomagnetic** storm ever recorded and aurora were seen as far south as Cuba and Hawaii.

The Carrington Event was disruptive to Victorian technology, but a similar solar storm today would interfere with GPS satellites, power grids and communications. Scientists therefore continually monitor the sun's activity so we can be forewarned and prepared.



- How do you think telegraph operators felt during The Carrington Event?
- Are we more prepared or more vulnerable to solar storms today than in 1859?
- Losing which technology failing would cause the most disruption today if a solar storm knocked it out?

WEDNESDAY 2ND SEPTEMBER

On 1st September 1859, astronomer Richard Carrington observed two bright flashes from the sun.

The next day the charged particles emitted by that solar flare reached Earth and disrupted telegraph signals. Operators received electric shocks and even when disconnected some wires continued to send messages!

‘The Carrington Event’ was the largest **geomagnetic** storm ever recorded. A similar solar storm today would interfere with GPS satellites, power grids and communications.



- How do you think telegraph operators felt during the event?
- Are we more prepared or more vulnerable to solar storms today than in 1859?
- Which technology failing would cause the most disruption today?