

Video: Magnetic field update

June 20 2014

This animation shows changes in Earth's magnetic field from January to June 2014 as measured by ESA's Swarm trio of satellites.

The [magnetic field](#) protects us from [cosmic radiation](#) and charged particles that bombard Earth, but it is in a permanent state of flux. Magnetic north wanders, and every few hundred thousand years the polarity flips so that a compass would point south instead of north. Moreover, the strength of the magnetic field constantly changes – and it is currently showing signs of significant weakening.

The field is particularly weak over the South Atlantic Ocean – known as the South Atlantic Anomaly. This weak field has indirectly caused many temporary [satellite](#) 'hiccups' (called Single Event Upsets) as the satellites are exposed to strong radiation over this area.

Provided by European Space Agency

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