## LETTER TO THE EDITOR

## **Magnetic Anomalies and the Paranormal**

In his article "Magnetic Anomalies and the Paranormal" in *JSE* 26:4 (Ralphs 2012), John D. Ralphs notes that correlations have been found between geomagnetic fluctuations and hallucinatory visions, poltergeists, PK phenomena, and ESP. Ralphs argues that "...it is a distinct possibility—indeed, a definite probability—that the active agent in most such cases is NOT the magnetic fluctuations themselves, but the cosmic rays that cause them." Ralphs describes the nature of these cosmic rays emitted from the Sun: He asserts that a Coronal Mass Ejection (CME) is a stream of cosmic rays that "can be imagined in terms of a gigantic volcanic eruption ejecting millions of tons of this electrically charged 'dust' at speeds in excess of four million miles per hour." Ralphs further asserts that these cosmic rays create the Northern Lights (Aurora Borealis).

The Sun does indeed emit cosmic rays, which can travel at the speeds approaching the speed of light, but these are not the constituents of a CME, and they are not responsible for geomagnetic fluctuations. Geomagnetic fluctuations, and the Aurora Borealis, are caused by a plasma of low-energy particles emitted from the Sun, traveling at between 50 and 1200 km/sec (Kivelson & Russel 1995, Campbell 2003, Kallenrode 2004).

Correlations between mental phenomena and geomagnetic fluctuations cannot be due to cosmic rays, as the latter arrive at the Earth one to three days before the plasma responsible for the fluctuations.

ADRIAN RYAN

adrian.ryan@greyheron1.plus.com

## References

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