## LETTER TO THE EDITOR

## **Response to Adrian Ryan**

Thank you very much indeed for your helpful correction to my *JSE* article "Magnetic Anomalies and the Paranormal" (Ralphs 2012). I am not surprised at the error, as my last serious consideration of cosmic rays was seventy years ago (I qualified in 1943). But I hope that you agree that it does not affect the point I hoped to make, that the simulation of magnetic anomaly effects using magnetic fields only cannot claim to be complete or authoritative.

Can I take this opportunity of asking your opinion on an associated matter on which I have failed to find any authoritative information? I maintain that study of the actual generation of action potentials in a neural axon of the brain establishes that the movement of electrical charges is almost entirely radial to the axon, so that the external magnetic fields generated at either end of a diameter will be opposed, and tend to cancel out. I suggest that the very low level of magnetoencephalography fields detected is because they are received only from epiphenomenal divergencies from the mathematical model (such as bends or junctions). This would account for the very low level of magnetic changes detectable external to the skull.

Again, thank you for your comment.

JOHN D. RALPHS jdralphs@tiscali.co.uk

## Reference

Ralphs, J. D. (2012). Magnetic anomalies and the paranormal. *Journal of Scientific Exploration*, 26(4), 781–790.