



2023

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Recommended Citation

Katzaman, Eric T. and Baumgardner, John (2023) "Modeling the Process of Rapid Geomagnetic Reversal During the Genesis Flood," *Proceedings of the International Conference on Creationism*: Vol. 9, Article 64.
DOI: 10.15385/jpicc.2023.9.1.65
Available at: https://digitalcommons.cedarville.edu/icc_proceedings/vol9/iss1/64

MODELING THE PROCESS OF RAPID GEOMAGNETIC REVERSAL DURING THE GENESIS FLOOD

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ABSTRACT

Remnant magnetization in the Earth's igneous rocks document that the Earth's magnetic field reversed its polarity many times during the Genesis Flood. Previous creationist research has argued that strong convective buoyancy within the Earth's liquid outer core during the Flood can cause the expulsion of magnetic flux outward from the core into the overlying mantle which produces rapid reversals of the Earth's surface dipolar magnetic field. This poster reports the status of our efforts to model this dynamic process in 3D spherical geometry using a magnetohydrodynamic numerical solver.

KEYWORDS

magnetohydrodynamics, magnetic reconnection, Earth's core, Genesis Flood, reversals

THE AUTHORS

Eric Katzaman has a B.S. in physics from Penn State University and works as a physicist at Northrop Grumman researching applications in superconductivity. He is also an Engineering Ph.D. student at Liberty University studying the magnetohydrodynamics of the Earth's core under Dr. John Baumgardner. His research entails understanding the Earth's magnetic field from a young Earth creationist perspective.

John Baumgardner has a Ph.D. in geophysics from UCLA and worked in computational physics at Los Alamos National Laboratory for most of his scientific career. Since the 1980's he has published extensively on catastrophic plate tectonics in connection with the Genesis Flood. More recently he has developed software to study the erosion, sediment transport, and deposition produced by giant tsunamis during the Genesis Flood as the explanation of the layered, fossil-bearing sediment sequences that today blanket the continents. He currently is research professor emeritus in the School of Engineering at Liberty University.