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ON THE ORIGIN AND REVERSAL OF EARTH'S MAGNETISM

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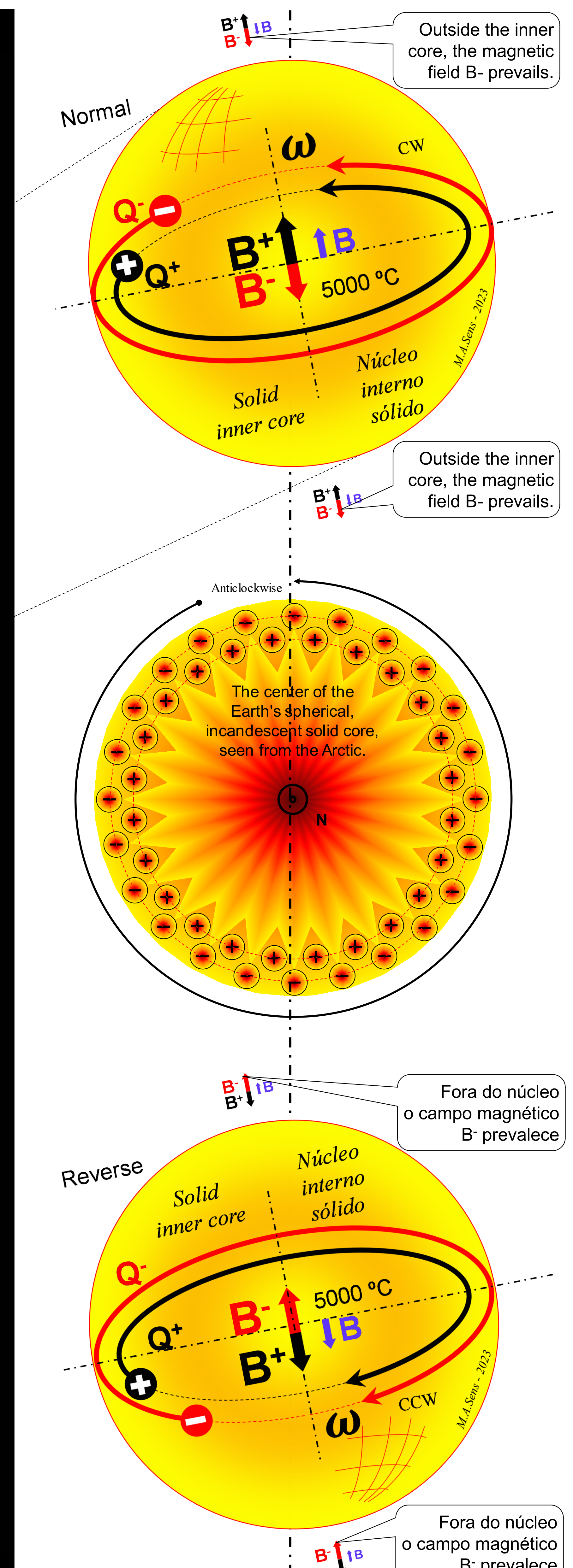
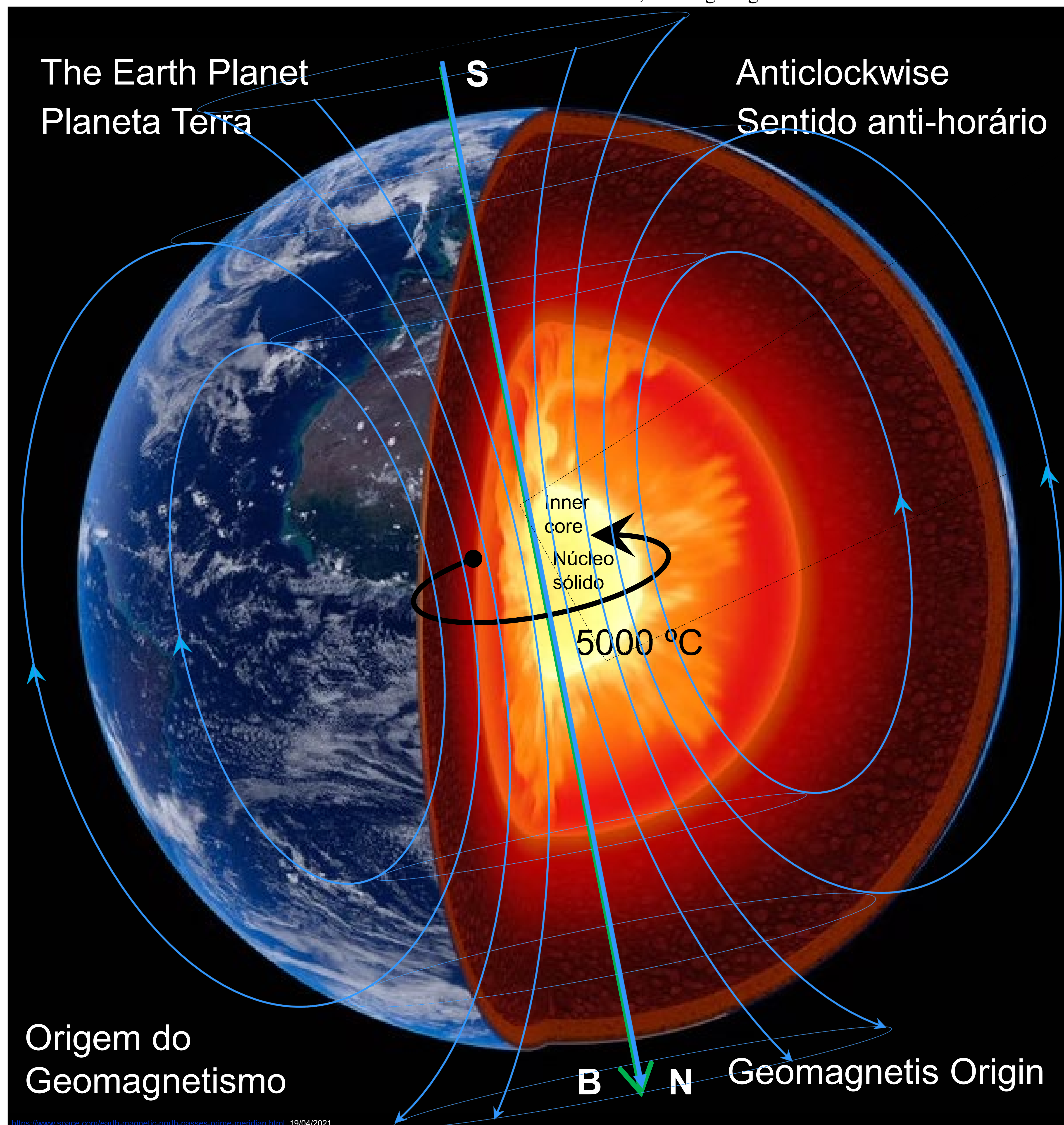
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Animation



Abstract: Albert Einstein was doubly right in 1905. At that time, he expressed that the origins of geomagnetism were still one of the great mysteries of Physics and that the explanations should be related to the separation of electrical charges. Since then, the most scientifically accepted theory to justify the origin of geomagnetism has been the one presented in 1919 by Joseph Larmor — that of the self-excited geodynamo. In 2020, news on the subject from MIT confirms that the origins of geomagnetism remain a mystery and that it is not known whether such magnetism existed before 3.5 Ga. The fact is that of the various theories presented for more than a century, none of them justifies all the geomagnetic phenomena and behaviors already observed. The present work will summarize a new hypothesis to fully justify the generation, maintenance and behavior of geomagnetism [1], which will certainly justify, in the same way, the existence or absence of magnetic fields on other celestial bodies, such as on other Planets and Satellites. In other words, the great mystery has been solved, at least theoretically. The self-excited geodynamo conjecture has been demystified. No new Physical Laws have been discovered. It has been shown that rotating electric charges create magnetic fields using the Fundamental Laws of Electromagnetism.

Comparing the incandescent inner core of the Earth to an orange, the peel would be the negative thermionic layer, and the white substrate would be the opposite, the positive charge. Both layers on the core surface currently rotate counterclockwise, along with Earth. These layers of electrical charges, in rotation with the solid core, generate distinct magnetic fields. Inside the inner core, the field results upward, and outside, it results downward, as shown in the figures below. The impact of an asteroid on Earth can cause oscillations in the inner core and even reverse the axis of rotation, causing magnetic reversal.



Reference: [1] – Sens, M. A., "A New Hypothesis to Fully Justify the Generation, Maintenance, and Behavior Of Geomagnetism"; 2023, Journal of Engineering Research, v.3/n.38 (ISSN 2764-1317).