Global “geomagnetic” field without iron

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Global geomagnetic field could be effect of bosonic field from fast Earth’s mantle turbulence

In 1600 William Gilbert published *De Magnete*, in which he concluded that the Earth behaved as a giant magnet. Today NOAA tells us essentially the same: “the Earth acts like a large spherical magnet: it is surrounded by a magnetic field that changes with time and location. The field is generated by a dipole magnet (i.e., a straight magnet with a north and south pole) located at the center of the Earth”. (cf.fig.1).

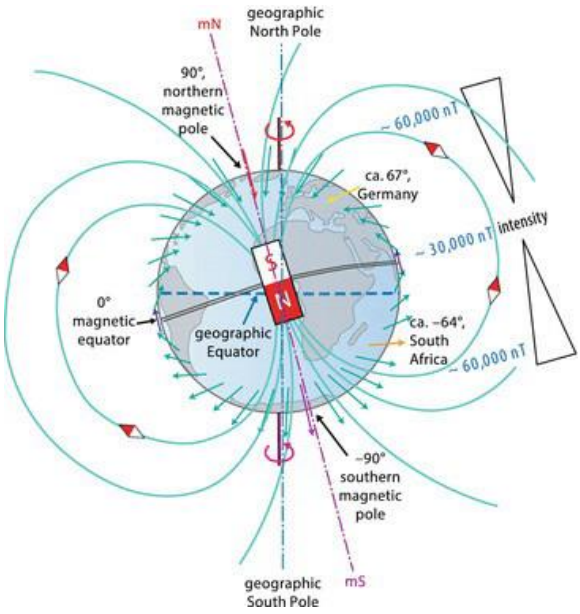

Fig. 1. Chrestomatic positioning of bar magnet into the Earth. *Credit: Henrik Mouritsen*

Nobody is telling You however why geographic equator does not coincide with magnetic one and why should geomagnetic field show observable change in time.

Further reading reveals, that “more than 90% of the field measured is generated INTERNAL to the planet in the Earth's outer core. This portion of the geomagnetic field is often referred to as the Main Field”.

From seismic experiments geophysicists conclude, that so called Earth’s outer core (fig.2) should be liquid. Because 17-th century speculation of Newton gave result for Earth’s density over 5.0 while density of Earth’s crust and magma is below 3.0, scientists “knew”, that there should be liquid iron inside (Williamson and Adams, 1923). As simple explanation of geodynamo has been assaulted by Cowling in 1934, scientists were pressed to invent more and more exotic models for explanation of “geodynamo” (see for example Gailitis et al, 2008). However irregular geomagnetic pole shift phenomena and absence of magnetic field on Venus are in fact rendered them useless.

Only real data we possess about content of dense iron in Earth's interior are as follows:

Iron content in Earth's crust: 5%.
Iron content in ultramafic magma: Fe–Mg > 8% (up to 32%MgO).
Iron content in mafic magma: FeO and MgO typically < 10 wt%.
Iron content in andesitic magma: Fe–Mg ~ 3%.
Iron content in rhyolitic magma: Fe–Mg ~ 2%.

Newtonian speculation in celestial mechanics- how to get masses of central objects by orbital data of secondary bodies recently has been disproved (Alksnis, 2018) and, as a consequence, real Earth's density should fall below 4.0 (if we "find" missing water and allow a bit for Expanding Earth concept).

Speculations about Earth's core are mainly beletristics (cf. Anderson, 2002). As geophysics gradually realises, that Earth's mantle density could be overestimated, outer core density is "growing" as compensation. Density of outer core has reached absurd value 12.2, which is double absurd, because at the same time outer core is considered to be liquid.

Developments of theoretic physics like bosonic field allows us to rewrite centuries old misconceptions. Earth's interior should be mainly liquid (Alksnis, 2018A). Turbulent movement of liquids should create certain turbulence in surrounding space (distortion in space-time, if You want). Changing Earth's mantle turbulence should be real cause of global "geomagnetic" field and it's changes.

Interaction between Earth's "field" and Sun's one could be explained similar way.

References

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