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Origin of the Earth's Electromagnetic Field Based on the Pulsating Mantle Hypothesis (PMH) HASSAN GHOLIBEIGIAN, Retired — In PMH, the Earth's Inner Core's Dislocation (ICD) and Outer Core's Bulge (OCB) phenomena are generated by unbalanced gravitational fields of the Sun and Moon on the Earth. Distance between the Earth's center and inner core's center varies permanently in magnitude and direction inside two hemispheres. Geometrical loci of the inner core's center has the shape of back and force spiral cone in each hemisphere. In other words, the inner core is rotating fast in the outer core inverse of the Earth's rotation a round per day. This mechanism speed up the processes inside the core and generates a Large Scale Forced Convection System (LSFCS) inverse of the Earth's rotation in the core. The LSFCS is the origin of the Earth's electromagnetic field. The LSFCS generates huge mass transfer and momentum of inertia inside the Earth too. The inner core's axis which is the Earth's electromagnetic axis doesn't cross the Earth's geophysical axis and rotates around it per day. The mechanism of this LSFCS has diurnal, monthly and yearly cycles. These cycles are sources of the Earth's electromagnetic field variability. Direction of the variable Earth's magnetic field lines from the South Pole (hemisphere) to the sky and 146 seconds/years apparent solar day length variations can be two observable factors for this mechanism. This dynamic system may occurred inside the other planets like the Sun and the Jupiter.

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