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Review Article

The Interrelation of Regularities of Differential Rotation of Physical Layers of the Earth's Mantle and Regularities of Biological and Epidemialogical Zonality

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Abstract

It is shown that regularity of differential rotation of physical layers (atmosphere with hydrosphere, thermosphere, biosphere) is inherent in the most part of natural Space objects (planets), generating the magnetic field in the interior. It is shown, how the structure of the magnetic field arising from deep physical non-uniformity of the substance of the mantle and the core influences emergence of biological, atmospheric and hydro-chemical zonal distribution of oceanic regions of Earth.

Introduction

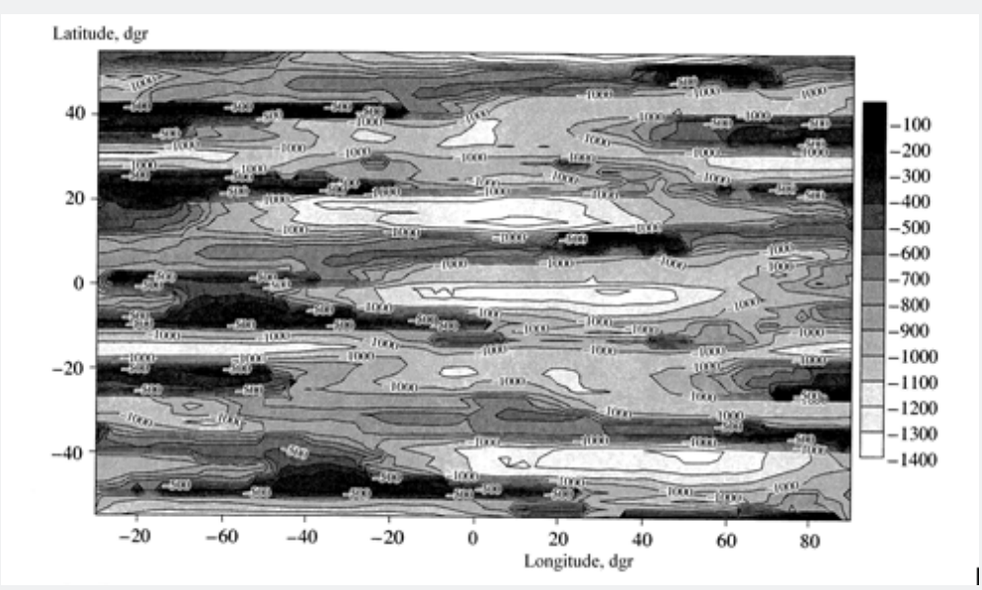

Figure 1: The sub-latitudinal magnetic anomalies of electromagnetic zones of the Earth's for the Gutenberg discontinuity at the core-mantle interface (depth 2900 km) in the look of «Maunders butterfly» for area Sun spots. The scale to the right of the figure designates amplitude of waves (in kilometers) electromagnetic inhomogeneities in the Earth's mantle on aforementioned depth. Along the horizontal axis values of the geographical longitude (in degrees) are shown. Along the vertical axis values of the geographical latitude (in degrees) are shown.

The choice of the subject of this report is caused by interest of many scientists to questions of the climate, the fauna, the flora change actual now and also the publications which have appeared recently on this subject in scientific literature in which authors try to understand the reasons of similar changes. Therefore the main objective of this report consisted in that on the complex of various physical and biological data to analyze the contribution brought by differential rotation layers of the Earth's mantle (Figure 1) [1,2] in long-temporal physical and biological cycle changes (change of zonal distribution of differential rotation the Earth's mantle causing change of zonal distribution of salt of waters of the World Ocean, the global change of structure of the atmosphere, the global change of zonal distribution of the temperature mode in the water of World Ocean and correspondingly the global change of zonal distribution of the fauna, the flora change with temporal periods 60-600 years, for example Long Kondratieff's wave biological cycle [3] (Figure 1).

Similar property of differential rotation of various physical layers many space objects generating magnetic fields (planets). The striking example of differential rotation of atmospheric layers is Earth and other planets, generating magnetic fields (Figure 2).

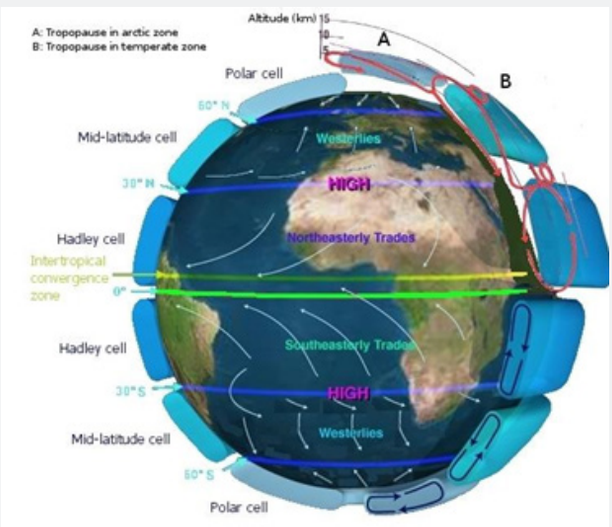

Figure 2: The sub-latitudinal structure of differential rotation of Earth's atmosphere layers.

Experimental data about structure zonal distribution of physical and biological parameters: It is necessary to show that, "MAGSAT" allocated on experimental satellite magnetic data, "CHAMP", differential rotation of layers of the Earth's mantle, is as the result reflected in its various physical, chemical and biological processes. In particular, it is possible to show that deep mantle temperature and sub-latitude inhomogeneities of the Earth's mantle cause surface temperature (Figure 3).

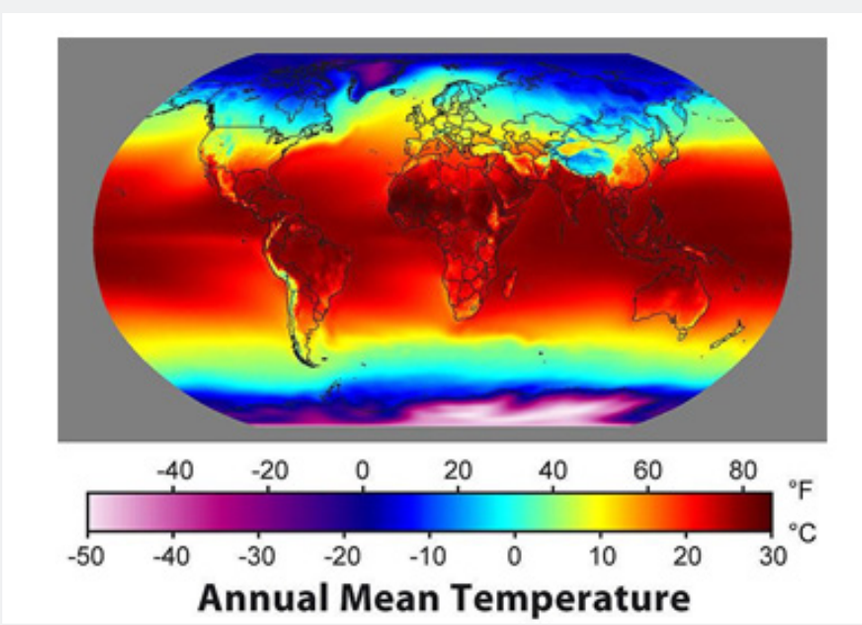

Figure 3: The structure of the annual mean temperature of sub-latitudinal zones are the magnetic projection of sub-latitudinal zones of the electromagnetic field of the Earth's mantle.

Moreover, mantle differential rotation causes similar differential rotation of the circulation of Earth's atmosphere and oceans (Figure 2,3) and respectively forms its climatic sub-latitudinal zones (Figure 4).

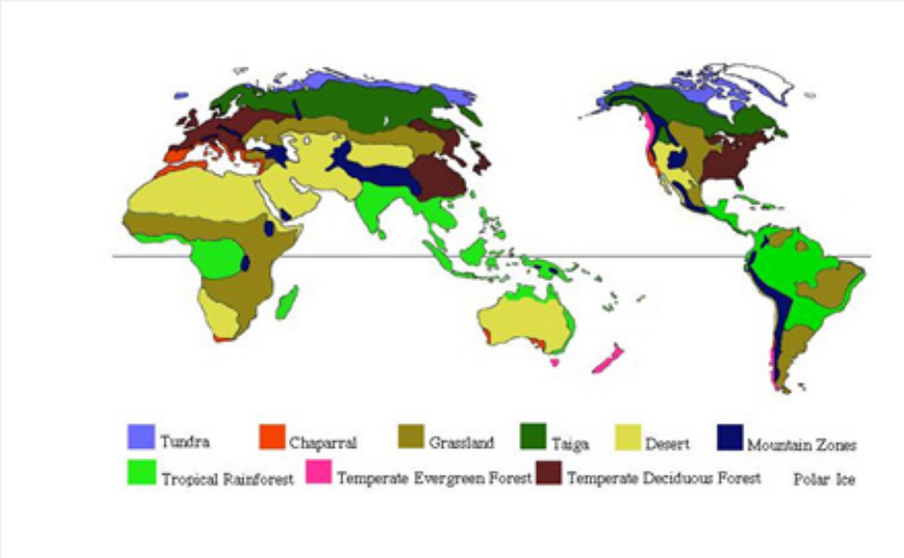

Figure 4: The structure of climatic sub-latitudinal zones of the Earth are the magnetic projection in electric carrying-out layers of the atmosphere (with the ionosphere) from sub-latitudinal electromagnetic zones of the Earth's mantle.

Shift of limits of value of differential rotation of physical layers of Earth from poles to the equator, owing to change of structure of convection in the outer core and therefore in the lower mantle, could bring, in our opinion, to emergence of biological epidemics with the dead of biological forms of life (Figure 5).

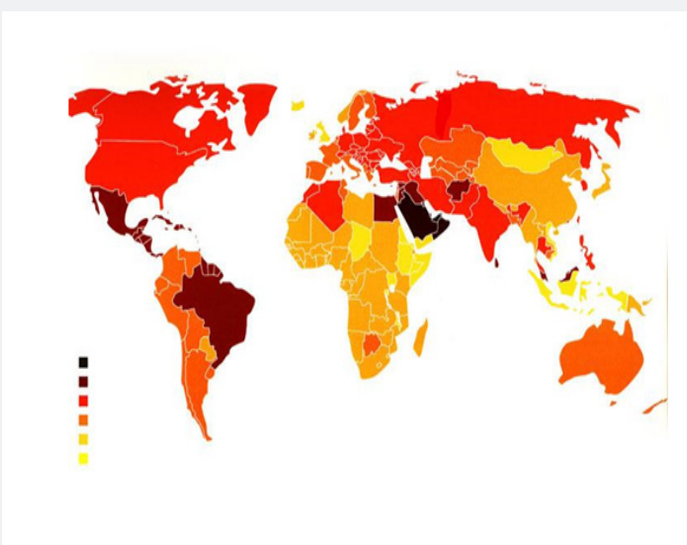

Figure 5: The world map of the location of the diabetes epidemic. 1-(black)-Heart Disease; 2-Bindness; 3-Kidney Failure; 4-Extremity Amputations; 5-(yellow)-Nerve Disorders.

Conclusion

It is shown that the zonal distribution of physical processes is narrowly connected with the magnetic zonal distribution of the mantle environment of planets in the hydrosphere and the atmosphere and respectively the zonal distribution of the biosphere processes depending on above-mentioned factors. It is shown that 60th year variations and Long biosphere Kondratieff's period correlates with sub-latitudinal inhomogeneities in the Earth's.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

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