Abstract

The temperature of the interior of Earth is sustained by the constant friction between the COATING of Earth and its LIQUID CORE. The coating of Earth, consisting of the crust and the upper mantle, is rotating under the influence of the alternating impact of the solar system and is rubbing against a liquid, metallic Earth's outer core, which is a spherical sliding surface for Earth's coating. Changes in Earth’s climate (which are dependent mainly on the heating of its surface) are an evidence that Earth’s coating moves in relation to its core. Climate change resulting from the tilt of the globe in relation to the sun causing the succession of the seasons. On top of this there are circular movements of Earth's coating around the axis of rotation of Earth.

1. New climatic theory

The temperature of the interior of Earth is sustained by the constant friction between the COATING of Earth and its LIQUID CORE. The coating of Earth, consisting of the crust and the upper mantle, is rotating under the influence of the alternating impact of the solar system and is rubbing against a liquid, metallic Earth's outer core, which is a spherical sliding surface for Earth's coating. Solid metallic inner core of Earth is in the grip of the magnetic field of the Sun, which alternates according to the pulse of gravity within the solar system. We see that the movements of the masses within Earth's geoid are coupled with internal interactions within the solar system, which are also subject to the influence of our galaxy.

Changes in Earth’s climate (which are dependent mainly on the heating of its surface) are an evidence that Earth’s coating moves in relation to its core. Climate change resulting from the tilt of the globe in relation to the sun causing the succession of the seasons. On top of this there are circular movements of Earth's coating around the axis of rotation of Earth.

Movements of the coating are mirrored by the changes in the position of north magnetic pole, which are fixed in their location against the sun. Throughout the duration of several thousand years, the magnetic poles travel seemingly on the moving surface of Earth along a curve
surrounding geographical pole. Deviations of the north magnetic pole from the north geographic pole reach over twenty degrees of latitude, ie. approximately 2500km and change over time (probably) on a regular basis, ie. determined by cyclical interactions within the solar system. The research of paleomagnetism show deviation of the northern magnetic pole from the north geographic pole (the axis of rotation of Earth) mirror the movements of Earth's coating in relation to the sun. Sometimes movement of Earth's coating reach to this extent that magnetic poles reversing itself.

Movements of Earth's coating change the moment of inertia of the Earth, which causes the variation of the speed of rotation. Increase in the speed of rotation of Earth was observed during the moments when the northern magnetic pole was crossing near the north geographic pole, and vice versa, ie. for example, around year AD 1600. I believe this reflects variability of the Earth's coating movement in relation to its center of gravity and in relation to the sun.

Deviations over twenty degrees latitude of the northern magnetic pole NMP- from the north geographic pole, and the circular apparent motion of NMP around the geographic pole, mirror the moves of Earth's coating which cause regional changes in Earth's climate. The width of climatic zones designated by the seasons on Earth's surface reaches about 5 to 20 degrees latitude. Related to these zones, rainy and dry climates, which are dependent on the latitude and insolation, move along the surface of Earth, together with Earth's coating movements, which are cyclical relative to the Sun. If the coating of Earth moves about 2500 km which is about 20 degrees latitude, climate zones shift respectively. In such case, a given region of Earth can experience a dry season instead of rainy season, and vice versa. For example, the shift of precipitation from summer to winter, observed in Iran for the past several thousand years, is one of the results of the movement of Earth’s coating.

Earth is flattened at the poles and when Earth’s coating rotates, this flattening moves closer to the equator. That is when the moment of inertia of Earth's rotation increases and its speed of rotation decreases. When Earth’s coating returns to its equilibrium position (which is when both magnetic and geographic poles are next to each other), the speed of Earth’s rotation increases because the moment of inertia decreases.

There was an increase in the frequency of earthquakes in the Mediterranean and in Poland during periods of large shifts of Earth’s coating, ie. up to 7000km in the years AD 250-700
and 1250-1860. Currently, the magnetic pole moves eastward, toward the geographic pole, increasing the speed of Earth’s rotation. This demonstrates that Earth's coating is returning to the equilibrium position. What will be the next moves of the magnetic pole and Earth's coating and what will they bring?

Cyclical waves of growth in the number of earthquakes in the Mediterranean and Poland observed in the period 750 BC to AD 2000 confirm the movements of Earth’s coating. The number of earthquakes rises when the Mediterranean region moves closer to the equator, where the tectonic stress is increased. This is exactly what we are currently observing in Italy.

Ceaseless movement of Earth's coating, causing cyclical and regional climate changes, causes the birth, rise and fall of civilizations and empires developing from east to west (in agreement with the movement of Earth's coating and climate zones) in the history of Indo-European and Asian civilizations.

Other consequences of the cyclical movement of the coating of Earth are described in the available online Polish book entitled "Historia naturalna i zmiany klimatu"

Warsaw, November, 11th 2016 20:12

Bogdan Góralski

2. Hemispheric temperature change versus shift of the Earth's coating

Fig. 1. Hemispheric temperature change
What we can see on above picture is higher temperature in Northern Hemisphere NH versus Southern Hemisphere SH in period around 1914-1956 and 1990-2017. It can be explained by shift of Earth's coating over liquid Earth's core. Meteorological stations located all around the globe have moved to the ecliptic that way, that on the northern hemisphere is more of solar irradiance versus southern hemisphere, and higher temperatures in NH are being noted, and SH is cooled.

2a. LOD (length of earth’s day) versus Earth’s coating movement

The moves of Earth's coating are correlated with LOD (length of day changes). When the Earth's coating moves to the North (the position of equator bulge is higher relate to the ecliptic plane), temperatures of NH decreasing and LOD (length of day) is increasing (speed of Earth's rotation is slowing down) and vice versa as you can see on the Fig.2 below. When LOD is decreasing (speed of Earth's rotation is faster), SST (sea surface temperature) increasing because oceanic upwelling decreasing and vice versa.

For the explanation of Earth's coating movement see my work above.
3. Movement of Earth's coating and circulation of water in Hadley cell

Changes in the location of the Earth's coating cause changes in the Hadley's cell range on the Earth's surface, because the ranges of rainfall zones and droughts resulting from the operation of atmospheric circulation cells, whose position is unchanged with respect to the ecliptic plane, are shifting.  
Due to the movement of the Earth's coating, the circulation of the ocean's waters is also changing - vertical and horizontal, which additionally affects the functioning of the atmospheric circulation cells and the changeable time of occurrence of precipitation and drought on the surface of the Earth.

Warsaw, 28 January 2019, 23:00  
Bogdan Góralski
4. Proof that the Earth's coating is moving

Below on the graph we see proxy temperatures from ice cores taken from southern hemisphere - Antarctic - Vostok, and northern hemisphere - Greenland - GISP2. We see that temperatures in Antarctic are lower than in northern hemisphere but occasionally they are the same or higher than northern hemisphere temperatures. We can explain this by Earth's coating rotations. When Earth's coating is in balance - this means that northern hemisphere is above ecliptic plane and southern hemisphere is below ecliptic plane and insolation of both hemispheres are even, temperatures of both hemispheres are the same too. When Earth's coating moves and northern hemisphere is closer to ecliptic plane the temperatures of Antarctic are lower than Greenland's temperatures because of higher insolation of Greenland. When Earth's coating moves in opposite direction and southern hemisphere is closer to ecliptic plane the temperatures of northern hemisphere are dropping down and southern hemisphere temperatures are rising. During the Holocene southern hemisphere temperatures are higher than northern temperatures and both of them have increased since 10000 BP. If planets of solar system will negatively change their positions on the sky there will be probably again cold period of Earth's climate. We need to research it.

Now we know that Earth's coating is moving accordingly to changes of temperatures of both hemispheres.

See the graph under the link:

http://www.climatedata.info/proxies/ice-cores/files/stacks_image_9595.png
5. GISS Surface Temperature Analysis (based on GHCN v3 + SCAR)

The graphs of the zonal temperature (below) distribution on the Earth's globe for the periods 1880-1961 and 1962-2018 presented below show the shift in time of high temperature zones to the North direction of the globe. This may indicate the shift of the northern hemisphere toward the ecliptic plane (and its much greater solar insolation than southern hemisphere), i.e. shift of the Earth's coating - the Northern Hemisphere more in direction to the ecliptic plane.

source: https://data.giss.nasa.gov/gistemp/zonal_means/
6. Why Earth's coating rotates around the liquid core of the Earth
Earth's coating consists of earthly crust and mantle. The earthly coating rotates around the liquid core of the Earth. Why does it rotate? Because the northern hemisphere is heavier than the southern hemisphere. In the northern hemisphere, there are more continents and the earthly crust in the continents is much thicker and much more dense than oceanic crust more common in the southern hemisphere. From Newton's law, we know that the power of gravitation is bigger when the pulling masses are bigger. So, when the group of the solar planets is approaching the Earth, the bigger gravitation power acts on the northern hemisphere and pulls it down to themselves. It explains decadal changes of position of the coating of the Earth, but what happens during the year? From Newton's law, we know that the distances of the pulling objects also affect the gravitation power. From this, we know that the gravitation power of the Moon acting on the Earth is two times bigger than the Sun's gravitation power. The Moon and Sun also cause the rotating of the Earth's coating like the group of planets of the solar system. We see in the below picture an image of rotating coating of the Earth in the graph of J2 changes which is Earth's shape coefficient = J2.

Source of picture from work:

**Degree 2 and Geocenter Variations from Satellite Laser Ranging**

**Minkang Cheng**

**Center for Space Research**

**The University of Texas at Austin**

We see in the above picture twelve of monthly changes of J2 in each year which are caused by gravitational pulling of the Earth's coating by the Moon.
On the above picture we see yearly changes of $J_2$ (blue continuous thin line from GRACE measures) which are caused by gravitational attracting of the Sun.

$J_2$ Coefficients depends from of the Earth's shape. $J_2$ maps changes in the flattening of the earth, which depend on the movements of the Earth's coating around the liquid nucleus of the Earth. When $J_2$ decreases, the flattening of the Earth increases and the angular velocity of the Earth increases, and vice versa. Flattening of the Earth increases because of movement of Earth's coating when the bulge on the equator is closer to axis of Earth's rotation.

Jakuszowice, 19th August 2017, 13:45        Bogdan Góralski

7. Explanation of reversals of magnetic field versus Earth’s coating movement

In the passes of the Solar System through the arms of the our galactic of Milky Way the gravitational influences in Solar System was increasing and this was resulting in bigger
rotation of the Earth's coating. Earth's magnetic field is very stable and is strong gripped in the solar magnetic field. When Earth's coating revolves, magnetic sign in the rocks of earthly crust is changing. To this day scientists have been thought that Earth's magnetic field rotates. In my opinion magnetic poles of the Earth are were stable versus rotating Earth's coating. Change apparent positions of the magnetic pole (by changes of magnetic signs in the lavas) is sign that Solar System went through an arm of the Milky Way. When Earth's coating was revolving, tectonic plates of the Earth's crust were subjected the variable centrifugal force that caused movement of the tectonic plates on the Earth's surface.

Jakuszowice, 19th August 2017, 15:10 Bogdan Góralski