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ELECTROMAGNETIC IMPULSES IN EARTH'S CRUST: ROLE IN FLUID SOLUTIONS AND EARTHQUAKES

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Abstract. The study of electromagnetic impulses in the Earth's crust and their impact on fluid solutions and earthquakes is of great interest to the scientific community. This article presents an example of spherical nodules forming as a result of electromagnetic impulses in layers containing oil, gas, and water. These explosions create fireballs with strong electromagnetic and gravitational effects, attracting chemical elements from the fluid layers. Understanding this topic is crucial to unraveling the relationship between geologic processes, the Earth's energy, and potential environmental impacts.

The research expands knowledge of crustal processes, their environmental consequences, and their connections to geologic phenomena. It provides a better understanding of the role of electromagnetic impulses, making it significant for scientific development. In the 21st century, global climate change poses a major challenge. While it is commonly attributed to the greenhouse effect from burning oil and gas, this article's analysis suggests that climate change also relates to the planet's warming due to decreasing levels of liquids in the lithosphere.

These liquids serve as a coolant for nuclear plasma reactions. Therefore, oil is not a finite resource but a component impacting the planet's vitality, as opposed to being solely an energy source for human civilization on Earth.

Key words: electromagnetic impulse, nodules, spheres, subduction, abduction, gravity, the formation fluid, cold fusion, fireballs, plasma.

Introduction

The idea of a hollow Earth arose only after the theory of the spherical shape of the Earth was established in scientific circles. Astronomer Edmond Halley (1656, 1742) suggested that our planet has a hollow inner sphere. Trying to explain the movement of the magnetic poles of our planet, he suggested that inside it rotates several spherical shells, inserted one into the other.

An example of the structure of the planet Earth is just spherical nodules.

Inside this nodule, the iron oxide content reaches 90%, proving astronomer Edmont Galey's assumption about the hollow structure of the inner spheres of Earth. These spheres are associated with electric discharges in the Earth's crust and mantle [12–14], specifically in zones of active tectonic faults. These discharges resemble underground thunderstorms with lightning reaching dozens of kilometers long. At the end of the lightning strikes, ball lightning can also be observed. The presence of ferromanganese nodules in the bottom of the Atlantic Ocean near mid–ocean ridges suggests their formation is due to ball lightning's electromagnetic and gravitational forces, rotating fluids in tectonic disturbances and reservoir layers [1]. This rotation attracts host rocks to the center, forming spherical rings (geospheres) that create nodules of various shapes. This contradicts the traditional understanding of reservoir structure, as the rotation of fluids requires a void (karst) instead of porosity and permeability. This absence of a crystal lattice is evident in coal seams, which are the result of paleonefti rather than organic matter like peat or paleo–trees. However, oil is formed from organic matter that transforms into the mantle through cold nuclear transmutation. It serves as a lubricant for geosphere rotation and cooling. The rotation of Earth's geospheres leads to lithospheric plates subduction, drawing carbon–rich organic matter into the mantle. By studying globular nodules formed in oil and gas reservoirs and deep seismics, we can gain insights into planetary structures and formation.

Since the 18th century, globular nodules have been a subject of research for over 250 years. However, the formation theory of these special natural bodies remains undiscovered. Various types of nodules in organisms (such as kidney stones and pearls), techno–nodules (like stones in glasses), and atmospheric formations (for example, hailstones) have been extensively studied. While pearls can be artificially produced, hailstones and globular nodules have not been successfully created by anyone [1]. This is partly due to the geological understanding of nodule formation being based on fixism, specifically the geosynclinal theory. Nodules were thought to be associated with the lithogenesis stage of host rocks and were categorized into two groups based on the time of formation: syngenetic, formed simultaneously with surrounding sediments, and epigenetic, formed after the deposition of host rocks. Some authors noted the lack of a clear distinction between these groups, allowing for the existence of nodules in which the central part is syngenetic, while the outer part is epigenetic and formed through growth after burial under sediments. However, this understanding did not account for horizontal tectonic disturbances within the Earth's crust, which can lead to the stratification of geolitodynamic complexes, rubbing or sliding against each other to form basal bundles or create karsts. Oil and gas reservoirs in various deposits, such as Tengiz, Zhetybai, and Uzen, can span from a few meters to hundreds, consisting of alternating fluid–resistant layers (clays, mudstones) and reservoirs (basal bundles, sandstones, conglomerates). As oil is a dielectric substance, it creates a natural electric capacitor where electric currents can accumulate due to friction between plates or scales, or through the dynamo effect of the Earth itself. The geospheres, rotating from the core at a speed of 20–40 m/s, the mantle at 1–10 m/year, and the lithosphere at 2–16 cm/year, play a role in this process.

During the discharge of a natural capacitor, spherical electromagnetic fields (in the form of a lightning ball) appear in voids filled with liquid and crushed (fragmented) rock, which is attracted by the electromagnetic field. Naturally, the formation of an electromagnetic field in the form of a vortex at a distance from the basalt package or karst occurs, so on the surface a nodule can reach a length of tens of kilometers and more than 1.5 m in diameter. The formation of tornadoes is also associated with the phenomena of air flow turbulence (rotation), and their study can provide additional information about the occurrence of such processes. Studying spherical nodules of the Mangyshlak mountain (Karatau) found inside the reservoir layers of the Lower Cretaceous and Jurassic, filled with sandy–clay rocks, one can assert that the nature of nodules is syngenic, while the rock is epigenic. This means that spherical nodules formed in a cavity and then the cavity was filled with the products of mud volcanism, burying the nodules and displacing the reservoir fluid. The nodules become very dense and only at the surface are destroyed by physical weathering, forming various spherical formations.

Similar processes occurring in the galaxy, planets and the Earth's crust are confirmed by experimental data conducted at the Institute of Physics of the Russian Academy of Sciences. Kurchatov Institute of Physics under the direction of Leonid Urutsky. "Urutsky effect" is associated with an unexplained phenomenon – a plasma object similar to a ball–shaped lightning [2]. The appearance of ball–shaped lightning is associated with the electromagnetic impulse of wires in distilled water.

During an underwater electric explosion, researchers observed a puzzling phenomenon resembling non–radioactive ball lightning. The rotation speed of this phenomenon was measured at 20–40 m/s. Surprisingly, after the experiment, the blast chambers contained foreign chemical elements in significant quantities, such as gold, silver, phosphorus, antimony, iron, and gallium. These elements were not present before and their presence challenged the laws of physics. Materials like titanium, iron, lead, nickel, and tantalum foil underwent transformations, with lead turning into gold, nickel into silver, and titanium into lead. Similar conditions were observed in a reservoir, which seemed to be hollow and filled with fluids like water, oil, or gas. This reservoir experienced electric explosions caused by the accumulation of electrical energy in the geolitodynamic complexes of the Earth's crust due to horizontal tectonic movements. A connection was proposed between the formation of coal from oil and the reverse process, which could lead to the creation of voids (karsts) filled with oil or water in different time periods [3, 4]. These voids were observed during the uplift of formations caused by horizontal obduction mechanisms. In coal mines and through the geophysical method of reservoir self–polarization, electromagnetic impulses have been documented. Notably, coal seams like Chelyabinsk, Tauchik, Ekibastuz, or the Kirov deposit (Karasyaz–Taspas) display subhorizontal exits during uplift.

Materials and methods of research. The structure of planet Earth is unique and practical, with knowledge that continues to this day. It is based on the rotation of geospheres from the core to the surface. Geological study of the planet reveals constant movements observed in rock and core samples. Deep seismic data shows faults and stratification into geolitodynamic complexes that move at different speeds, causing tectonic erosion and pulverization of rocks. This mechanism, known as obduction, leads to the exhumation of rocks from the Mohorovičić discontinuity and structure formation. Subduction serves as a mechanism for fluid formation and the supply of "fuel" for nuclear plasma reactions. The driving force behind these movements in the geological sense is mechanical convection rather than thermal convection. The rotational regime of the planet Earth transfers movements from the core to the mantle and ultimately to the surface [5]. The speed of these movements varies, with GPS data showing speeds ranging from 2 cm/year on continents to 16 cm/year in oceans. The difference in speed is related to the thickness of the lithosphere, which is much thicker on continents compared to oceans. This difference in thickness leads to the formation of different geolitodynamic complexes, which slide under each other and dampen the speed of plate movements on the surface. The damping of velocity occurs at the level of geospheres transmitted from the core, with rotation speeds ranging from 1 m/s to 20–40 m/s [2, 6]. The rotation of geospheres sets the lithosphere in motion and creates the gravitational, geomagnetic, and electric fields of the planet [15].

Horizontal movements of geolitodynamic complexes with different vertical speeds lead to the formation of faults and the crowding of sediments. These movements result in the subduction of some sediments under continents while others approach and obduct. The reflecting horizons of sedimentary strata are joined by inclined faults interpreted as listric faults that flatten out along the Mohorovičić discontinuity. The flattening of these faults is due to the difference in sliding velocities of geolithodynamic complexes transmitted from mechanical convection to the lithosphere.

Sedimentary deposits twist and undergo varying degrees of metamorphosis, forming the foundation of the continental crust. The basaltic layer of oceanic crust always lies at the base of the continental crust. The lithological and stratigraphic breakdown of sedimentary basins causes a discrepancy between paleontological and palynological data, which is attributed to the twisting mechanism. Stratification should occur based on geolithodynamic complexes, not seismophations or formations. Unconformity of rocks, known as erosion surfaces, is associated with tectonic erosion caused by horizontal movements or sliding of geolithodynamic complexes from the mantle to the surface [7–9].

An example of continental subduction is the seismic profile of the Mogt in the joint zone of the Scythian plate and the Astrakhan–Aktobe island arc [10]. The main surface of the subduction layer remains unchanged at a depth of 11c, while another part is submerged (subducts m^2) and the other is pushed up (obducts f) (figure 5). A deep wedge–shaped structure is formed, serving as a mechanism for the articulation of continental plates where subduction, obduction, and rifting occur. The deep profiles of the SMT carried out in various parts of the world show that the boundaries of the subduction layer are registered at depths of 11–12c. The structure of the planet is comparable to globular nodules, supporting the idea that planet formation through electromagnetic impulses is correct [7, 8].

Deep profiles of the SMT in different parts of the world (Russia, the USA, Kazakhstan, etc.) reveal boundaries of the M registered at depths of 11–12c, considering the ocean depths as well, which aid in cooling nuclear–plasma reactions in the Earth's mantle and core. The planet's structure resembles globular nodules shown in figures 2 and 3, supporting the correct theory of planet formation through electromagnetic impulses.

The formation of the Earth's crust based on sliding plate tectonics involves horizontal movements of geolitodynamic complexes (plates, scales). Friction between these complexes (the millstone effect) [9] results in tectonic erosion and formation of rock flour (limestone, mudstone, siltstone) that dissolve in reservoir fluids and get transported over long distances. Larger differences (conglomerates, pellets, pebbles, quartz sandstone, etc.) create basal bundles between dense plates, serving as effective reservoirs. Dense rocks also act as energy storage capacitors. This effect explains the composition of reservoir layers in the Zhetybai, Uzen, and Riphean–Vendian deposits of the Volga–Ural NGP, such as the Sokolovogorskoye field in Saratov, mainly comprising sandstones. Devonian reservoirs also consist of quartz sandstones (Vorobyov D–IV). The "millstone effect" also clarifies the varying impurity content (mudstone, limestone, etc.) in coal deposits, where dilution can only occur in a liquid state, substantiating its origin from hydrocarbons. Currently, these basal bundles are attributed to various paleorossils.

In turn, basal bundles serve as excellent "cushions" and "lubricants" for sliding plates, causing them to separate or lag behind each other due to differences in friction force. This process contributes to the formation of tectonic karsts filled with products from the transportation of reservoir fluids from sedimentary deposits enriched with various minerals, including oil, gas, coal, and polymetals.

In the mantle, fluid formation of other minerals occurs under the action of electric explosions, creating conditions for cold transmutation of chemical elements, ball lightning, pressure, electromagnetic induction, catalysts, and other nuclear–plasma–physico–chemical reactions [2, 7, 8, 9]. Deep seismic profiles are interpreted as a general tectonic process of Earth's evolution, driven by mechanical convection within its interior. Movements in the Earth's crust lead to a cycle of rocks and the formation of minerals, including hydrocarbons. Disruption of this ecosystem leads to warming of the planet. Earth's shell serves as a heat sink for thermal processes, resulting in the degradation of hydrocarbons [3]. Earthquakes confirm the discharges in the crust and are a major problem in seismology [11, 13, 14].

There are two opposing opinions on earthquake forecasting: it is necessary and possible, or it is impossible and can cause damage. The argument against forecasting is based on the random nature and uniqueness of each earthquake event, making it difficult to predict. However, the abundance of unreliable signs does not prove the absence of stable predictive signs.

The argument for forecasting is based on the assumption that long–term earthquake preparation and high accumulated energy must lead to powerful wave processes. The task is to select the frequency range where resonant phenomena occur. In the case of seismic microdistricting and development areas, the power of the low–speed zone on a rigid base is considered. The delay of seismic waves in soft sediments leads to increased shaking and resonant phenomena.

The fundamental frequency values for different types of soil and layers vary. For precipitation of greater thickness or extremely soft soils, the value is around 0.2 Hz. For very thin layers such as deluvium or weathered rocks, the value can be 10 Hz or more. Inhomogeneities in the layer can be identified by lower resonant frequencies, which have a power two orders of magnitude greater compared to the zone of low velocities.

If we consider the earth's crust as a zone of low velocity compared to the upper mantle (with respective speeds of 6 km/s and 8.1 km/s for "p" waves), the fundamental frequency for the earth's crust can be calculated as follows: F_0 = 3.4 km /s/200, resulting in a period t0 of approximately 58–59 seconds.

Seismic stations in Kyrgyzstan were equipped with seismic receivers that had maximum periods of 2 seconds or 20 seconds. Due to the sensitivity limitations of these receivers (1500 for the first type and 50000 for the second type), it was not possible to observe low–frequency oscillations.

In 1992, ten seismic stations recorded and transmitted digital data within the Chui depression and its mountain frame. These recordings had a wide frequency range of 0.01Hz to 200Hz (period from 100 seconds to 0.05 seconds) and a dynamic range of up to 140 dB. Analysis of these recordings showed that oscillations with a period of 58–60 seconds and their harmonics were the most intense and carried information about the direction of horizontal movements of the earth's crust, consistent with GPS data.

The intensity of this wave varied among different stations but remained relatively unchanged for a long time (up to 100 days) at each station, with an amplitude spread of no more than 5–10%.

Before a significant earthquake, the intensity of these vibrations at each station experienced dramatic changes.

To estimate the intensity of the low–frequency wave with a period of 58 seconds and its harmonics, higher–quality waves were filtered out, and the full vector of these oscillations was obtained. Vibrations with a period of 5 seconds were further filtered out using a notch filter in the range of 0.1–0.3Hz. The azimuth of the low–frequency wave approach was determined by recording the maximum amplitude for one horizontal component and the minimum amplitude for the other horizontal component after mathematically rotating the horizontal components clockwise from 0 degrees to 180 degrees by 10 degrees.

Significant changes in the amplitudes of this wave at most stations, sometimes along with changes in azimuths of approach, preceded all earthquakes with k>13 and a significant number of earthquakes with k>11 by 15–45 days. The coverage area extended up to 400 km.

Earthquakes in the landfill area and up to 100 km from it consistently caused sharp changes in the amplitude of the earthquake wave. Aftershock activity did not affect these amplitude changes. The sliding of geolithodynamic complexes in the lithosphere resulted in the formation of cavities filled with fluids migrating from subduction zones (figure 5). After 15 to 45 days of cavity filling, a natural electric discharge occurred, closing the electric capacitor within the lithosphere and leading to an earthquake [13]. Deep seismics for more than 20 seconds are necessary to predict earthquakes accurately and calculate the time of fluid migration from the subduction zone to the cavity based on abrupt amplitude changes observed in seismological data.

These findings indicate that a strong pulse causing deformation of the earth's crust and changing the amplitude of natural crust vibrations originates internally rather than being induced from the surface. This pulse occurs before the actual earthquake in the earthquake preparation volume.

Promising methods for detecting this pulse include studying the magnetic field and measuring deformation and tilt at multiple points on the polygon. With these techniques, it is possible to predict short–term strong earthquakes in a radius of 300–350 km.

Research results. The results of studies have shown that electric explosions in formations containing oil, gas and water produce a special type of formation – spherical nodules. These explosions have a strong impact both on the environment and on the formations themselves. Fireballs are particularly notable for their unusual electromagnetic and gravitational properties.

Fireballs are highly energetic and have the ability to attract chemical elements from fluid layers. This, in turn, favors the formation of spherical nodules. Within these nodules, scientists have found that chemical reactions occur, resulting in the movement of elements from one state to another.

Such a phenomenon could provide important practical applications in mineral extraction. Understanding the processes involved in electromagnetic impulses and nodule formation can help optimize extraction methods and improve process efficiency. Moreover, this phenomenon has the potential to be used in other fields such as geophysics and materials science, opening up new opportunities for research and development of new technologies.

However, more research and experiments are needed to fully unravel all the mechanisms and consequences of electromagnetic impulses in reservoirs. Such research will not only help to gain a deeper understanding of this phenomenon, but will also help to develop innovative approaches and technologies to help improve processes in various industries.

The study of electromagnetic impulses and their effects on fluid solutions and earthquakes is of great interest to the scientific community. The results obtained allow us to expand our understanding of crustal processes, their environmental consequences and their relationship to geologic phenomena. There is an opportunity to better understand the role of electromagnetic impulses in geologic processes and their environmental effects.

Conclusion. The study of electromagnetic impulses in the earth's crust and their effects on fluid solutions and earthquakes is critical to unraveling the relationship between geologic processes, earth energy, and potential environmental impacts. Analysis of this article suggests that climate change may be related to the warming of the planet due to decreasing fluid levels in the lithosphere. Oil is not only a source of energy for human civilization, but also affects the viability of the planet as a whole.

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ЭЛЕКТРОМАГНИТНЫЕ ИМПУЛЬСЫ В ЗЕМНОЙ КОРЕ: РОЛЬ ФЛЮИДНЫХ РАСТВОРОВ И ЗЕМЛЕТРЯСЕНИЙ

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Аннотация. Изучение электромагнитных импульсов в земной коре и их влияния на флюидные растворы и землетрясения представляет большой интерес для научного сообщества. В данной статье приводится пример формирования сферических конкреций в результате электромагнитных импульсов в пластах, содержащих нефть, газ и воду. Эти импульсы создают огненные шары с сильным электромагнитным и гравитационным эффектом, притягивающие химические элементы из флюидных слоев. Понимание этой темы имеет решающее значение для раскрытия взаимосвязи между геологическими процессами, энергией Земли и потенциальным воздействием на окружающую среду.

Исследование расширяет знания о процессах в земной коре, их экологических последствиях и связи с геологическими явлениями. Оно позволяет лучше понять роль электромагнитных импульсов, что делает его значимым для развития науки. В XXI веке глобальное изменение климата представляет собой серьезную проблему. Хотя его обычно связывают с парниковым эффектом, возникающим из–за сжигания нефти и газа, анализ данной статьи позволяет предположить, что изменение климата также связано с потеплением планеты из–за снижения уровня жидкости в литосфере.

Эти жидкости служат теплоносителем для ядерных плазменных реакций. Таким образом, нефть – это не конечный ресурс, а компонент, влияющий на жизнеспособность планеты, а не только источник энергии для человеческой цивилизации на Земле.

Ключевые слова: электромагнитный импульс, конкреции, сферы, субдукция, абдукция, гравитация, пластовая жидкость, холодный синтез, огненные шары, плазма.

ЖЕР ҚЫРТЫСЫНДАҒЫ ЭЛЕКТРОМАГНИТТІК ИМПУЛЬСТАР: СҰЙЫҚ ЕРІТІНДІЛЕР МЕН ЖЕР СІЛКІНІСТЕРІНДЕГІ РӨЛІ

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Аңдатпа. Жер қыртысындағы электромагниттік импульстар және олардың сұйық ерітінділер мен жер сілкіністеріне әсерін зерттеу ғылыми қауымдастық үшін үлкен қызығушылық тудырады. Бұл мақалада мұнай, газ және су бар қабаттардағы электромагниттік импульстар нәтижесінде сфералық түйіндердің пайда болуының мысалы келтірілген. Бұл импульстар сұйықтық қабаттарынан химиялық элементтерді тартатын күшті электромагниттік және гравитациялық әсері бар от шарларын жасайды. Бұл тақырыпты түсіну геологиялық процестер, Жер энергиясы және қоршаған ортаға ықтимал әсерлер арасындағы байланысты ашу үшін өте маңызды.

Зерттеу жер қыртысындағы процестер, олардың экологиялық салдары және геологиялық құбылыстармен байланысы туралы білімді кеңейтеді. Бұл электр импульстардың рөлін жақсы түсінуге мүмкіндік береді, бұл оны ғылымның дамуына маңызды етеді. XXI ғасырда жаһандық климаттың өзгеруі күрделі мәселе болып табылады. Ол әдетте мұнай мен газдың жағылуынан туындайтын парниктік әсермен байланысты болса да, осы мақаланы талдау климаттың өзгеруі литосферадағы сұйықтық деңгейінің төмендеуіне байланысты планетаның жылынуымен де байланысты екенін көрсетеді.

Бұл сұйықтықтар ядролық плазмалық реакциялар үшін салқындатқыш ретінде қызмет етеді. Осылайша, мұнай түпкілікті ресурс емес, жердегі адамзат өркениеті үшін энергия көзі ғана емес, планетаның өміршеңдігіне әсер ететін компонент.

Түйін сөздер: электромагниттік импульстар, конкрециялар, сфералар, субдукция, абдукция, гравитация, қабат сұйықтығы, суық синтез, от шарлары, плазма.