

Paleomagnetic study of Neogene sediments in strike-slip basins along the Tanakura Fault

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The Tanakura Fault, one of the major tectonic line in Japan, is developed from the Tanagura Town, Fukushima Pref. to the Hitachiohta City, Ibaraki Pref., with a NNW-SSE trending direction. They consist of the Eastern Marginal Fault, the Western Marginal Fault and a shear zone between the faults. The movement of the Tanakura Fault is thought to be related to the Japan Sea opening during the Early to Middle Miocene (e.g., Jolivet and Tamaki, 1992). Geologic studies have revealed that strike-slip basins were developed due to a left lateral movement of the Tanakura Fault (e.g. Amano, 1991). This study aims to refine the chronostratigraphy of geologic sequences of strike-slip basins developed along the Tanakuura Fault, and to reconstruct a tectonic history of the basin based on paleomagnetic analyses.

Samples for paleomagnetic analyses were collected from the Yajika Rhyorite, Kitatage Formation, Kitatage Formation, Osawaguchi Tuff Member and the Nawashiroda Formation in the Yamatsuri, Western Daigo, Eastern Daigo and Yamagata Basin.

As the results of paleomagnetic analyses, the Kitatage Formation, Osawaguchi Tuff Member, Asakawa Formation and Nantaisan Volcanic Breccia exhibit non-rotating reversed polarity supposed to be correlated to the Chron C5Br (ca. 16.04-15.2 Ma). On the other hand, the Nawashiroda Formation exhibits reversed and normal polarities correlated to the Chrons C5Br, C5Bn, C5ADr (ca.15.2~14.6 Ma) , which associated with a clockwise rotation ca. 20°, suggesting that a counterclockwise rotation ca. -20° is needed to be at this area before deposition of the Nawashiroda Formation.

Keywords: The Tanakura Fault, strike-slip basin, Japan Sea opening, Middle Miocene, paleomagnetic study

Paleomagnetism of the Sorachi and Yezo Group in the Ashibetsu area, central Hokkaido, Japan.

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Paleomagnetic study was performed on Upper Jurassic~Lower Cretaceous Sorachi Group and Yezo Group in Ashibetsu area, central Hokkaido aiming at quantitative estimation of tectonic movements in reference to the northeastern Eurasia. Characteristic remanent magnetization (ChRM), which is carried by various ferromagnetic minerals, was isolated for five sites. To determine their origin, we executed isothermal remanent magnetization (IRM) experiments, and origin of ChRM is categorized into two groups. One of them is positive in reversal test, and enhanced precision parameter after tilt correction implied pre-folding origin. Untilted formation mean direction ($D=-12.0^\circ$, $I=47.7^\circ$, $\alpha_{95}=12.3^\circ$) is characterized by significantly shallower inclination than the expected value for coeval mother continent, and northward movement since the Cretaceous is determined to be 2100 km (± 1500 km). In comparison with previous paleomagnetic studies and tectonic models, central Hokkaido could consist of at least two components and have experienced rapid northward movement driven by plate motion.

Keywords: Paleomagnetism, Hokkaido, Cretaceous

Tectonic Basin Structure in Kansai Area on the point of subsurface structure using borehole database

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Kansai Geo-informatics Research committee started to study about subsurface structure around Kansai Area after the1995 Kobe Earthquake. This committee also carried out the standard borehole survey at the each area and tried to resolve the relation between geological properties and geotechnical properties. The results of this mission were published "Shin-Kansaijiban" series. We are considered each borehole data using geological information such as tephra, microfossils, sedimental environment and so on, and referred to the seismic reflection survey.

The results of this study make clear the tectonic movement of each area. In Osaka area marine clay layers show the tilting toward to the Ikoma Fault. Other area also find these sign of tectonic movement from the subsurface borehole data.

Keywords: borehole, database, tectonic movement, sedimentary environment

Why arc-shaped archipelago was formed ? How concave plate basin was built ? All origin of plate tectonics, was solved by unique hypothesis.

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Origin of plate tectonics, was solved by unique physically meaningful hypothesis.

Even people who stubbornly resist the continental drift theory of Wegener, neither the driving force is unknown, was no people who oppose to adopting a plate tectonics. As the driving force, Mantle Convection Hypothesis of Holms 1929, springing up and coming force to press the plate in the ridge, the power to pull the plate to crawl into the mantle.

Hard plate flowable layer asthenosphere under the lithosphere and assume a rigid a mesosphere under it the plates to move the surface of the earth without parallel deformed like a rigid body, he assumed. Mantle is springing up from the hot spot, there is the fact that parallel seamount chains has been formed. And it has also been observed that the driving direction is bent. I believe that is happening is mantle convection in the difference of basically any driving force is also density. Problem lithosphere of the same density, can not be proposed first to crawl under the other two mechanical rhythm. In addition, not be able to propose mechanisms and reasons for moving direction was bent.

Multi impact hypothesis, following (A) a hypothetical two steps (B), as a result (1) - (15).

(A) Protoplanetary CERRA the orbit has been flattened by the Jupiter perturbations, was ruptured in the tension of Jupiter and the sun.

(B) The cross-sectional mantle lobe is for the track that crosses the Earth, caused the sequential Mantle Impact.

Results (1) Injecting a month in the collision to the first of the Pacific Ocean position (12.4km / s, 36.5 deg.), and the trajectory of the month was calculated to be 60RE.

(2) Why? Is formed in almost the same orbital plane moon and the solar system, how the moon was formed only in the mantle? Because collision of the mantle piece.

(3) Meteorite in minute fossil quality achondrites-iron meteorite, which is why a mixed? Cause is Multi Impact.

(4) In the tidal disruption of CERRA, the asteroid belt has been formed energy . Is Kyusetsu is an error that was not accustomed to substantially equal to the planet in the long axis length..

(5) Caused a large species extinction in the collision over a few degrees. It is an inevitable collision mechanism that does not rely on chance.

* (6) By the collision of a plurality of cross-sectional mantle lobes, also 70 p/c of the Earth surface area of the size of the deep sea Yosoko (-5km) has been formed.

* (7) Plate tectonics of the Plate boundary Why was formed in that position? Collision mantle peeling, vacuum melting and cracking.

* (8) Pacific Rim arc-shaped archipelago and back-arc basin, and Darwin raised by the collision loss and isostatic, plate is concave in the mantle reduced pressure.

* (9) Was to elucidate the mystery of the origin and driving force of plate tectonics. Driving force = complement of the moment of inertia eccentric due to the collision.

* (10) To back-arc plate, and Pacific Ocean convex plate each other press in the eccentric moment driving force, starts submarining by isostasy.

* (11) Why form kimberlite pipe in South Africa Premier and Russian Mirunui district? Concentration and continental drift to Hawaii position to the collision and the impact of the counter electrode, and collision on the opposite side of the Drake Passage of Mirunui mine, Antarctica moved

stabilized.

*(12) Why is earth's axis was tilted 23 deg from the revolution surface? Was estimated to collision of CERRA division pieces to the Drake (high latitude) position.

*(13) Why, the core of the Earth eccentricity (about 10 %) happened or? CERRA debris collision, Earth's mantle is missing, isostasy.

(14) Jupiter large red origin of plaques? Form a thermal conductivity difference soliton in the collision of MI mantle piece .cf. Shoemaker Levy comet.

(15) To outer planet is a gas-ice, or Pluto's is why silicate dwarf planet? In CERRA Mantle debris of the swing-by.

Keywords: Formation of the arc-shaped archipelago, Formation of a concave plate basin, Origin of plate tectonics, Multi-Impact Hypothesis, The origin of the deep sea floor, Lunar origin

