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N. Seitov

Al-Farabi Kazakh National university, Almaty. Kazakhstan.
E-mail: nassipkali.seitov@mail.ru

POSSIBLE FEATURES OF FORMATION OF THE EARTH AND INITIAL STAGE OF ITS GEOLOGICAL DEVELOPMENT

Abstract. Here is a brief overview of the views of scientists who doubt the truthfulness of the hypotheses of the initially cold Earth and the homogeneous accumulation of the planet, and provide a number of evidence supporting the reality of the "moderately hot Earth" and the heterogeneous accumulation of its matter. The author of the article believes that the accumulation of the Earth was indeed heterogeneous (the primary hydride core and the primary metal-silicate mantle of the planet were initially separated), but the core of the earth, like the entire Earth, was not molten at the time of its formation. According to the author of the article, radiogenic heat and heat of differentiation of the planet's matter are not leading in providing geological development of the Earth. In his opinion, the energy basis for the development of the Earth as a geological object (after its formation into a two-layer system) is the heat released as a result of dehydrogenation (the process of hydrogen release from the hydride bond) of the primary hydride nucleus according to V. I. Larin. The author does not exclude also the essential role in the development of the planet of the possibility of transforming the gravitational energy of the Cosmos into thermal energy in the deep horizons of the planet according to the views of A. A. Logunov and E. P. Levitan.

The author of the article, having reviewed the publications of recent years on the need to distinguish the heged (geldey) aeon in the history of the Earth's development, expresses the idea of the controversy of these representations and cites a number of statements to confirm the validity of his doubt on this issue.

Key words: formation of the Earth; sources of thermal energy of the Earth; heterogeneous accumulation of the Earth; geological history of the Earth; hydride core; dehydrogenation; "Magmatic ocean"; Hadean (hedge) aeon.

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Н.Сеитов

Казахский национальный университет им. аль-Фараби, Алматы, Казахстан

ВОЗМОЖНЫЕ ОСОБЕННОСТИ ОБРАЗОВАНИЯ ЗЕМЛИ И НАЧАЛЬНОГО ЭТАПА ЕЕ ГЕОЛОГИЧЕСКОГО РАЗВИТИЯ

Аннотация. Приведен краткий обзор представлений ученых, сомневающихся в правдивости гипотез изначально холодной Земли и гомогенной аккумуляции планеты, и приводящих ряд доказательных фактов в пользу реальности «умеренно горячей Земли» и гетерогенной аккумуляции ее вещества. Автор статьи считает, что аккумуляция Земли действительно была гетерогенной (первичное гидридное ядро и первичная металл-силикатная мантия планеты были обособлены изначально), однако ядро земли, как и вся Земля в