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About the temperature distribution in the Earth on it's accumulation stage.

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Up to our time there was not a satisfy explanation of dividing process for reservoirs: core and mantle during the period of 10 million years, that result had been achieved using the data of W-Hf isotopic system. Nevertheless there had been exist an estimation for the process of dividing 100 million years. In the paper (Anfilogov, Khachay, 2005) we had suggested a new model of planet of the Earth's group accumulation. Taking into account of energy dissipation of the short-lived radioactive isotopes, first of all 26Al ,in the matter of the germs of the growing proto planets leads to the overestimation of their initial heat state. In the bodies about 100 km, the temperature in the central areas becomes higher than the melting iron temperature, whereas near the surface forms a thin cold envelope. By bodies increasing it's thickness decreases reciprocally to the body radius. The time of that stage rising is equal to 1 million years. A new mechanism of matter differentiation is realized: the relative velocities of the bodies compact with the germ are sufficient for crashing of the upper envelope and for supporting the merging of inner melted especially iron parts. The mass of the growing planet germ is not sufficient for keeping of especially silicate pieces of the envelope. Just on that stage of bodies combining, which arise (100-1000) km can be happen the effective dividing of the W-Hf system between the iron and silicate reservoirs through the period of time about or less than 10 million years. The forming of the core and mantle from that in the most divided reservoirs ends later. By mathematical modelling it is taken into account, that after the inelastic impact of the falling bodies on the germ with the fluid center area a part of pieces of the cold upper envelope because of a bit of the received kinetic energy does not as a whole leave the germ, and forms a so called "cocoon" on the orbit near the parent body. The increase of the density of particles in the "cocoon" leads to some increase of the probability of the impact with the germ that is the increase of the surface density of the matter near the germ, and the velocity of the proto planet growing depends linear from that value and therefore it also grows. Secondly, the account of the obtained dependence of the temperature distribution in the growing small bodies of the proto planet cloud from their masses allowed us quantitatively estimate the valuable contribution of that factor in the heating of the forming planet, which had not been early taken into account. That additional heat on the early stage can be urgently needed for explanation of the thermal evolution of the formed planet. That results had been achieved by support of the grant RFBR 07-05-00395.