

A numerical simulation of the Earth's thermal-chemical evolution by using one-dimensional forward box model.

Ritsuo Morishita[1], Toshikazu Ebisuzaki[1]

[1] Advanced Computing Center, RIKEN

We propose a new one-dimensional model of the thermal-chemical evolution of the Earth. This model was used parameterized convection method. The numerical simulations was carried by changing the parameters: core formation time, mantle viscosity, surface Moho temperature, radioactive heat source. We found that the gross energy of the Earth can explain potential energy release while core formation time. The mantle viscosity and plate formation are most important factor after secure cooling.