

In this paper we investigate influence of the interior and exterior magnetic fields on mantle heating of Mercury. Exterior field is induced by currents in the magnetosphere, interior field is generated by dynamo deep in the planetary core, whose outer layer is stably stratified. After summarization of basic facts about Mercury we derive a formula for magnetic field on the surface and on the inner boundary. Afterwards we investigate the influence of conductivity estimates and periods on heat production in the mantle. We found out that for expected conductivities (iron core, silicate mantle) magnetic field doesn't have any influence on mantle convection.