

Dynamos in small objects: Mercury, Moon and Ganymede

(小さな天体のダイナモについて：水星，月とガニメデ)

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ABSTRACT

Core dynamics and associated dynamo action of small objects such as Mercury, Moon and Ganymede are very unique compared with Earth-sized and even larger objects in various aspects. Most remarkable is the peculiar core crystallization regimes due to relatively low pressure and high sulphur concentration in the core, which yields different types of convection and dynamo. Also, mechanisms and lifetime of an ancient lunar core dynamo is still uncertain. Now it is a challenge for dynamo modelers to numerically model dynamos of these bodies. In this presentation, we briefly summarize such efforts and show some results obtained from our dynamo modeling and observations of lunar magnetic field.