

The Interior Structure of Jupiter Towards Future Missions of the Jovian System

木星の内部構造：木星系の将来探査に向けて

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ABSTRACT

The legacy of past Jupiter exploration has shed light on the interior structure of Jupiter through *in situ* measurements of its gravity field, physical properties, and atmospheric compositions. However, outstanding problems still remain to be solved: the core mass of Jupiter, the region of H-He immiscibility, and the oxygen abundance in the atmosphere. The Juno's arrival at Jupiter scheduled for July, 2016 will challenge the mysteries. In this talk, we summarize recent progress in our understanding of the Jovian interior and then discuss how we can theoretically impose a tighter constraint on the interior structure of Jupiter. We also discuss what to do next towards future missions of the Jovian system.