

Observation of herman tectonic surface features and its implication to Mercury's early history

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Studies of Herman tectonic surface features are reviewed and plans for theoretical analysis such as numerical simulations are presented. Mercury has many tectonic features such as lobate scarps that are considered to indicate planet-wide thermal expansion caused by inner core solidification, lineament that are considered be formed as a result of tidal despinning, and wired terrain antipodal to gigantic Caloris basin that is considered to be formed as a result of concentration of seismic waves. Planet wide observation of these tectonic features is significantly meaningful to understand early history of terrestrial planets as well as Mercury. Additionally, we present plans for observation of herman surface by Common Imaging System onboard BepiColombo MMO, which is scheduled to be launched in 2009.