

SLIM: Small spacecraft for demonstration of lunar pinpoint landing technology

(SLIM: 小型探査機による高精度月面着陸技術実証)

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ABSTRACT

In this presentation, mission proposal of SLIM (Small Lander for Investigating Moon) is overviewed. SLIM is a small spacecraft for demonstration of lunar pinpoint landing technology. Now SLIM survives to the last stage in a selection process for the next mission launched by the Epsilon rocket. SLIM aims at achieving accurate navigation (~ 100 m) to a landing point on the moon; the Marius Hills Hole is provisionally considered to be the landing point. Various researches concerning the pinpoint landing technology, which are for example image-based navigation, landing shock absorbers, navigation control algorithms, landing radar, and the advanced propulsion system, are intensively performed by the WG members containing university people. Also SLIM is an extremely light-weight spacecraft whose dry mass is less than 130 kg including the propulsion tank. Therefore a lot of innovative technology for reducing the bus weight is applied. The outcome will be surely useful for future exploration missions.