

## OMOTENASHI onboard processing system

Tetsuo YOSHIMITSU, Masatsugu OTSUKI, Tatsuaki HASHIMOTO,  
Atsushi TOMIKI, and OMOTENASHI project team

Text

Institute of Space and Astronautical Science,  
Japan Aerospace Exploration Agency

### Abstract

OMOTENASHI is a small spacecraft heading for Lunar surface scheduled to be launched by NASA's SLS rocket in 2018. It is composed of an orbiting module and a surface probe.

The orbiting module orients itself to the Lunar surface by using chemical thrusters with its three-axis attitude stabilised by internal wheels. The highlight of the orbiting module comes immediately before the ignition of the solid motor to make a final deceleration onto the Lunar surface. Power-consuming actions concentrate on the short-term period and the onboard computer system is designed to process them.

The surface probe is ejected at the final phase of landing to make something on the Moon. Lightweight is essential and the onboard computer system is designed independently from the one of the orbiting module.

This poster presentation describes the onboard processing system of both modules enabling the missions.