

# Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



PPS001-04

Room:101

Time:May 27 09:15-09:30

## Development of Solar Power Sail System for Future Jupiter System Exploration

Ryu Funase<sup>1\*</sup>, Osamu Mori<sup>1</sup>, Yuichi Tsuda<sup>1</sup>, Hirotaka Sawada<sup>1</sup>, Takanao Saiki<sup>1</sup>, Junichiro Kawaguchi<sup>1</sup>

<sup>1</sup>JAXA

JAXA has been studying solar power sail technology for future outer solar system exploration and is planning to launch middle-sized Jupiter system probe in late 2010s. As a stepping stone for enhancing the technology readiness level toward this mission, a small solar power sail demonstration probe "IKAROS" was developed and launched in 2010, which became world's first solar sail in space and successfully demonstrated several essential technologies such as solar sail deployment, power generation by large area thin film solar cells and orbit control by solar sail. In this presentation, the achievements by the IKAROS probe and current development status of solar power sail for Jupiter system exploration.

Keywords: solar power sail, electric propulsion, Jupiter exploration