
International Session (Oral) | Symbol P (Space and Planetary Sciences) | P-CG Complex & General

[P-CG11_28AM1]Instrumentation for space science

Convener:*Ayako Matsuoka(Research Division for Space Plasma, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency), Ichiro Yoshikawa(The University of Tokyo), Chair: Ayako Matsuoka(Research Division for Space Plasma, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency), Ichiro Yoshikawa(The University of Tokyo)

Mon. Apr 28, 2014 10:00 AM - 10:45 AM 421 (4F)

This session will cover instrumentation and measurement techniques for the study of space science. We welcome contributions discussing newly designed instruments, and mission oriented instruments for satellites / sounding rockets already in space or near launch as well as the ground based instruments. Status reports on the space missions are also welcome. This is the international session. We encourage the contributions especially from the Asian countries based on their own space missions.

10:30 AM - 10:45 AM

[PCG11-P09_PG]A study for candidate scientific instruments for DESTINY

3-min talk in an oral session

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Keywords:Epsilon Rocket, DESTINY, Lagrange point

DESTINY (Demonstration and Experiment of Space Technology for Interplanetary Voyage) aims to demonstrate new technologies of high energy orbit insertion, large scale ion engine, ultra light-mass solar panel, etc., which will be useful for deep-space mission by Epsilon launch vehicles. DESTINY has possibility to equip scientific mission instruments when system design makes the margin of the resource. DESTINY can conduct scientific observations for a half to one year on the Halo orbit of solar-terrestrial Lagrange 2 (L2) point. If conditions permit, DESTINY will leave L2 Halo orbit, and transfer to the next destination. Potential scientific topics include in-situ observation and remote sensing from L2 for, such as, plasma, energetic particles, and the magnetosphere in the plasma sheet of terrestrial magnetosphere. It is considered to be useful for the pilot observations for future infrared, gamma-ray, and cosmic-ray space astronomical telescope. It is probable to observe and monitor Near Earth Objects (NEO), inter-planetary and inter-stellar dust. It is also valuable to observe ultra-violet and X-ray emission from planetary phenomena. The mass allocated for the instruments is, however, currently estimated as in the range of between a few and ten kilograms. DESTINY will play roles as pilot experiments for these full-scale observations.