

## ISS 搭載可視分光器 IMAP/VISI による大気光観測：打上直前状況 Airglow observation mission with a visible spectrometer IMAP/VISI on ISS: Current status for the launch

坂野井 健<sup>1\*</sup>, 山崎 敦<sup>2</sup>, 秋谷 祐亮<sup>3</sup>, Perwitasari Septi<sup>1</sup>, 大塚 雄一<sup>4</sup>, 阿部 琢美<sup>2</sup>, 齊藤 昭則<sup>3</sup>  
SAKANOI, Takeshi<sup>1\*</sup>, YAMAZAKI, Atsushi<sup>2</sup>, AKIYA, Yusuke<sup>3</sup>, PERWITASARI, Septi<sup>1</sup>, OTSUKA, Yuichi<sup>4</sup>, ABE, Takumi<sup>2</sup>, SAITO, Akinori<sup>3</sup>

<sup>1</sup> 東北大学大学院理学研究科, <sup>2</sup> 宇宙航空研究開発機構宇宙科学研究所, <sup>3</sup> 京都大学大学院理学研究科, <sup>4</sup> 名古屋大学太陽地球環境研究所

<sup>1</sup>Grad. Sch. of Science, Tohoku University, <sup>2</sup>JAXA/ISAS, <sup>3</sup>Grad. Sch. of Science, Kyoto University, <sup>4</sup>STEL, Nagoya University

The ISS-IMAP mission is one of the Japanese Experiment Module (JEM) 2nd stage plan which will be launched in the summer of 2012 onto the International Space Station (ISS) with HTV (Konotori). We completed the development and manufacturing of a visible imaging spectrometer instrument (VISI) for this mission. VISI will measure three nightglow emissions; O (630 nm, altitude 250 km), OH Meinel band (730 nm, altitude 87km), and O<sub>2</sub> (0-0) atmospheric band (762 nm, altitude 95 km) with the two field-of-views which enable us to make a stereoscopic measurement of the airglows looking forward (+45 deg.) and backward (-45 deg.) to subtract contaminations from clouds and ground structures. We designed a bright (F/0.9), wide-angle (field-of-view 90 degrees) objective lens. VISI have a two-line-slit on the first focal plane to perform the stereoscopic measurement. Each slit, i.e., field-of-view, is faced perpendicular to the orbital plane, and its width is about 550 km mapping to an altitude of 100 km. We will obtain a continuous line-scanning image for all emissions line from + 51 deg to -51 deg. in geographic latitude by the successive exposure cycle with a time interval of 1 - several sec.

We carried out so far the optical test including the adjustment of focus and alignment, intensity calibration, function check, vibration and vacuum thermal tests. We also performed the system integration test on the Multi-mission Consolidated Equipment (MCE). In this February, MCE will be mounted on the H-IIB rocket at the Tanegashima Space Center of JAXA. We present the development of VISI, and the current status for the launch in this summer.