

**R005-P20**

ポスター 3 : 11/6 AM1/AM2 (9:00-12:30)

## **ISS-IMAP/VISIによって観測された赤道中間圏における高輝度大気光構造**

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## **Bright airglow structures in the equatorial mesosphere observed by ISS-IMAP/VISI**

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International Space Station-Ionosphere, Mesosphere, upper Atmosphere and Plasmasphere mapping (ISS-IMAP) mission frequently observed bright band-like structures of the mesospheric airglow in 762nm wavelength with Visible and near Infrared Spectral Imager (VISI) instrument. VISI's nadir-viewing observation captured two-dimensional structures of the airglow from the molecular oxygen between September 2012 and August 2015. The FOV width of VISI's 762nm observations was 600 km in the direction perpendicular to the ISS trajectory, and longer than 10,000km along the trajectory. Bright band-like structures that stretched in the zonal direction, and have higher emission than 3k Rayleigh in the equatorial region were one of the outstanding structures observed by VISI. Statistical analysis revealed that the occurrence of the bright band has the first maximum in March and the second maximum in August. It appeared in the pre-midnight local time sector and is located around the geographical equator. It tends to appear in the longitudinal sector from -100 degrees to +100 degrees. It has low occurrence rate in the longitudinal sector over the Pacific Ocean. The GAIA model indicates that the enhancement of the 762nm airglow is caused by the enhancement of the atomic oxygen in the mesosphere not only by the downward diurnal tidal wind but the convergence of the meridional neutral wind on the equator. The intensity of the bright band can be a proxy of these wind system in the mesosphere. The features of the bright band-like structures of the 762nm airglow, and their generation mechanism will be discussed in the presentation.