# ひさきによって観測された金星熱圏極端紫外酸素大気光の周期変動の朝夕非対称

# 益永 圭 [1]; 関 華奈子 [2]; 寺田 直樹 [3]; 土屋 史紀 [4]; 木村 智樹 [5]; 吉岡 和夫 [6]; 村上 豪 [7]; 山崎 敦 [8]; 垰 千尋 [9]; Leblanc Francois[10]; 吉川 一朗 [11]
[1] 東大・理
; [2] 東大理・地球惑星科学専攻; [3] 東北大・理・地物; [4] 東北大・理・惑星プラズマ大気; [5] 理研; [6] 東大・理; [7] ISAS/JAXA; [8] JAXA・宇宙研; [9] NICT; [10] LATMOS-IPSL, CNRS; [11] 東大・理・地惑

# Dawn-dusk difference of periodic oxygen EUV dayglow variations at Venus observed by Hisaki

# Kei Masunaga[1]; Kanako Seki[2]; Naoki Terada[3]; Fuminori Tsuchiya[4]; Tomoki Kimura[5]; Kazuo Yoshioka[6]; Go Murakami[7]; Atsushi Yamazaki[8]; Chihiro Tao[9]; Francois Leblanc[10]; Ichiro Yoshikawa[11]
[1] Univ. Tokyo; [2] Dept. Earth & Planetary Sci., Science, Univ. Tokyo; [3] Dept. Geophys., Grad. Sch. Sci., Tohoku Univ.; [4] Planet. Plasma Atmos. Res. Cent., Tohoku Univ.; [5] RIKEN; [6] The Univ. of Tokyo; [7] ISAS/JAXA; [8] ISAS/JAXA; [9] NICT; [10] LATMOS-IPSL, CNRS; [11] EPS, Univ. of Tokyo

We report a dawn-dusk difference of periodic variations of oxygen EUV dayglow (OII 83.4 nm, OI 130.4 nm and OI 135.6 nm) in the upper atmosphere of Venus observed by the Hisaki spacecraft in 2015. Observations show that the periodic dayglow variations are mainly controlled by the solar EUV flux. Additionally, we observed characteristic ~1 day and ~4 day periodicities in the OI 135.6 nm brightness. The ~1 day periodicity was dominant on the duskside while the ~4 day periodicity was dominant on the dawnside. Although the driver of the ~1 day periodicity is still uncertain, we suggest that the ~4 day periodicity is caused by gravity waves that propagate from the middle atmosphere. The thermospheric subsolar-antisolar flow and the gravity waves dominantly enhance eddy diffusions on the dawnside, and the eddy diffusion coefficient or the wave filtering effect changes every ~4 days due to large periodic modulations of wind velocity of the super-rotating atmosphere. This implies that the ~4 day periodicity of the EUV dayglow may reflect the dynamics of the middle atmosphere of Venus. We also examined the effects of the solar wind on the dayglow variations by shifting measurements at earth to Venus. We did not find clear correlations between them. Howerver, since there are no local measurements of the solar wind at Venus, we remain the effect of the solar wind uncertain.