

Radial distribution of sulfur and oxygen ions in the Io plasma torus observed by Hisaki spacecraft

\*Kazuo Yoshioka<sup>1</sup>, Fuminori Tsuchiya<sup>2</sup>, Tomoki Kimura<sup>3</sup>, Go Murakami<sup>4</sup>, Ichiro Yoshikawa<sup>1</sup>, Atsushi Yamazaki<sup>4</sup>, Yasumasa Kasaba<sup>2</sup>, Masaki Fujimoto<sup>4</sup>

1.The University of Tokyo, 2.Tohoku University, 3.RIKEN, 4.ISAS/JAXA

The imaging spectrum of Io plasma torus in extreme ultraviolet (50-150nm) has been observed by EXCEED on Hisaki. We analyzed them using the spectrum diagnosis method and deduced the column averaged plasma parameters (such as S<sup>+</sup>, S<sup>++</sup>, S<sup>+++</sup>, O<sup>+</sup>, etc.) from the radial distance of 6 to 8 Jovian radii. The local densities of those ions are deduced and the clear increase of S<sup>+</sup> (about 3 times) after the Io's outburst event in 2015 are seen.

Keywords: Io plasma torus, sulfur, oxygen