

R009-14

Zoom meeting D : 11/1 PM1 (13:45-15:30)

14:15~14:30

JUper ICy moons Explorer(JUICE)に搭載のSubmillimetre-wave Instrument(SWI)

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The Submillimetre-wave Instrument(SWI) on JUper ICy moons Explorer(JUICE)

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The Submillimetre-Wave Instrument (SWI) is one of the 10 scientific payloads on the JUper ICy moon Explorer (JUICE). The main scientific objectives of SWI is to investigate the atmospheric structure, compositions and dynamics of the middle atmosphere of Jupiter and exosphere of its moons, as well as thermophysical properties of the satellite surfaces. SWI observations will provide pioneering direct measurements of atmospheric compositions in Jupiter system. SWI will performed limb and nadir observations in the frequency region 530-600 and 1075-1275 GHz. Japanese contribution is the development of main- and sub- reflectors, actuators for the instruments, feasibility studies, data processing, and scientific contributions. We present current status of the JUICE/SWI.

JUICE 搭載装置の一つにサブミリ波分光計 Submillimetre- Wave-Instrument (SWI) がある。深宇宙探査機の歴史の中で、サブミリ波テラヘルツ波を用いた惑星観測はこれまで例がなく SWI が初めての提案となる。SWI の主な目的は木星中層大気の力学的挙動、衛星希薄大気の構造や成分、表面熱力学的性質を調べることである。サブミリ波テラヘルツ波帯における放射を大気周縁と直下方向から受信する。周波数帯は 530-600 と 1075-1275 GHz である。本講演では、SWI が拓く科学や測器について述べる。