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AAS021-23

Room:102

Time:May 23 15:45-16:00

Night time radical chemistry observed by SMILES

YASUKO KASAI¹, Philippe Baron^{1*}, Hideo Sagawa¹, Donal Murtagh², Joachim Urban², BrO team in SMILES Algorithm team¹

¹NICT, ²Chalmers Institute of Technology

A new generation of super-sensitive submillimeter-wave receivers, employing SIS (Superconductor-Insulator- Superconductor) technology, will provide new opportunities for precise remote sensing observation of minor constituents in the atmosphere. SMILES had been launched at 11/09/2009, and installed on the Japanese Experiment Module (JEM) in the International Space Station (ISS). SMILES is a collaboration project between NICT and JAXA.

Mission objectives of SMILES are:

- i) Space demonstration of super-sensitive SIS mixer and 4-K mechanical cooler technology
- ii) Demonstration of super-sensitive global observation of atmospheric minor constituents

JEM/SMILES observes the atmospheric species such as O₃, H₃₅Cl, H₃₇Cl, ClO, HO₂, BrO, HOCl, HOBr, HNO₃, CH₃CN, Ozone isotope species, H₂O, and Ice Cloud with the precisions in a few to several tens percents. We will present the diurnal variation of the minor radical such as BrO, HO₂.

Keywords: SMILES, BrO