

---

## Spectroscopic Observations of Saturn with SpeX/IRTF

Kim, Joo Hyeon<sup>1</sup>, Kim, Sang Joon<sup>1</sup>, Pak, Soo Jong<sup>2</sup>, Keith Noll<sup>3</sup>,  
Tom Geballe<sup>4</sup>, Kim, Min Jin<sup>5</sup>, Lee, Sung Ho<sup>5</sup>, Son, Dong Hoon<sup>1</sup>

<sup>1</sup>Department of Astronomy and Space Science, Kyung Hee  
University, Yongin, Korea

<sup>2</sup>Korea Astronomy Observatory, Daejeon, Korea

<sup>3</sup>Space Telescope Science Institute, Maryland, U.S.A.

<sup>4</sup>Gemini Observatory, Hawaii, U.S.A.

<sup>5</sup>Department of Astronomy, Seoul National University, Seoul, Korea

The spectroscopic observations of Saturn were carried out at IRTF from Feb., 13 to 14, 2003 (UT) to obtain latitudinal and longitudinal variations of CH<sub>4</sub>(ν<sub>3</sub>+ν<sub>4</sub>-ν<sub>4</sub>) emissions in the mesosphere with the SpeX, which is a medium resolution 0.8~5.4μm spectrograph. We covered a 120° longitudinal range of Saturn in the 3.13~3.53μm region with a 60"×0.8" slit and a single-order mode. We will present preliminary scientific results for the variations of the mesospheric CH<sub>4</sub> emissions.