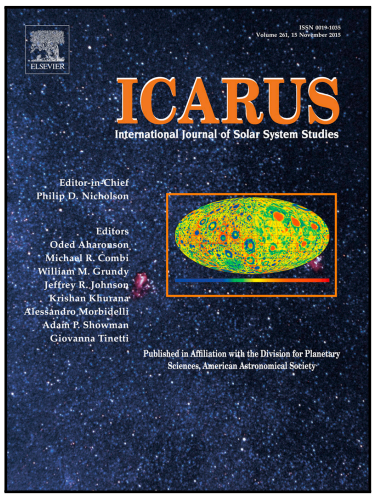

Composition and structure of fresh ammonia clouds on Jupiter based on quantitative analysis of Galileo/NIMS and New Horizons/LEISA spectra

L.A. Sromovsky, P.M. Fry

PII: S0019-1035(17)30487-6
DOI: 10.1016/j.icarus.2017.10.037
Reference: YICAR 12672

To appear in: *Icarus*

Received date: 7 July 2017
Revised date: 2 October 2017
Accepted date: 27 October 2017

Please cite this article as: L.A. Sromovsky, P.M. Fry, Composition and structure of fresh ammonia clouds on Jupiter based on quantitative analysis of Galileo/NIMS and New Horizons/LEISA spectra, *Icarus* (2017), doi: 10.1016/j.icarus.2017.10.037

Highlights

- In 2002 Baines et al. identified fresh NH3 clouds on Jupiter using Galileo NIMS.
- Identification of NH3 was based on absorption features at 2 and near 3 microns.
- New Horizons observed Jupiter with a 1.25-2.4 micron imaging spectrometer in 2007.
- LEISA observations detected many small clouds with 2 micron absorption of NH3.
- We used quantitive modeling of NIMS and LEISA spectra to constrain cloud properties.
- LEISA spectral features at 2 microns are consistent with large ammonia particles.