

## ***Interactive comment on “Cross-track Infrared Sounder (CrIS) satellite observations of tropospheric ammonia” by M. W. Shephard and K. E. Cady-Pereira***

**Anonymous Referee #1**

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This manuscript describes an ammonia retrieval algorithm for CrIS. The algorithm is well developed, described, and evaluated. The data from the retrieval are expected to be of high value for further analyses. Valuable guidance is offered in section 4 on the comparison of the retrieved profile with other profiles. I recommend publication after minor revisions.

Section 3.1 briefly notes that the retrieved profile values are expressed as the natural log of the volume mixing ratio. Does it make sense to explicitly specify the use of natural log in equation 1? What are the potential implications of the use of the natural log? Could it contribute to the retrieval bias by allowing errors to have more influence

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in a positive direction than a negative direction?

Section 6.2.2, what is the significance of scaling the surface measurements by 1/6?

Some of the figure text is small and hard to read

p11380, l6, retrieved ammonia

p11384, l9, an across

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Interactive comment on Atmos. Meas. Tech. Discuss., 7, 11379, 2014.

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