Interactive comment on “Retrieval of ammonia from ground-based FTIR solar spectra” by E. Dammers et al.

Anonymous Referee #2

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<General Comments>

This paper describes the retrieval of NH3 from ground-based FTIR at four stations in different local surface conditions and different altitudes. The authors succeeded to derive useful information including seasonal cycles and even vertically resolved NH3 concentrations at some sites. I think this paper gives an important information to understand the nature of global NH3 budget. The paper is mostly written well and the conclusions are clear, and I recommend this paper to be published in ACP after some minor corrections which will be described below.

<Minor Comments>

1) P.23283, Line 9: I prefer “artifacts” rather than “artefacts”
2) P.23283, Line 22: “CrIS” instead of “CR-IS”


4) P.23290, L.14: 1.9ÉŽ of freedom → 1.9 degree of freedom

5) P.23291, Line 2: DOF of 1. → DOF of 1.0.

6) P.23291, Line 24: 34.23 % for the Jungfraujoch → 34.2% for the Jungfraujoch

7) P.23292, Line 4: Is it really “pressure and temperature broadening parameters” which are critical for the NH3 concentrations, not “line intensity parameter”?

8) P.23292, Line 11: mean column total of 13.7 → mean total column of 13.8

9) P.23293, Line 9: As for Bremen → As for Lauder

10) P.23293, Line 15: The bottom panel → The third panel

11) P.23293, Line 17: 0.82 x 10^{-15} → 0.80 x 10^{-15}

12) P.23294, Line 13: mean of 13.47 → mean of 13.8

13) P.23295, Line 1: I prefer “artifacts” rather than “artefacts”

14) P.23295, Line 16: NH3 → NH_3 (subscript)


Interactive comment on Atmos. Chem. Phys. Discuss., 15, 23279, 2015.