

## ***Interactive comment on “Validation of ACE and OSIRIS ozone and NO<sub>2</sub> measurements using ground-based instruments at 80° N” by C. Adams et al.***

### **Anonymous Referee #1**

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Submission: Adams et al., Validation of ACE and OSIRIS ozone and NO<sub>2</sub> measurements using ground-based instruments at 80N

General comments: The paper is an extensive report on the validation of ozone and NO<sub>2</sub> measurements of ACE (FTS and MAESTRO) and Osiris. The paper is technically well written and covers the topics very thoroughly. This paper is, however, not very enjoyable reading and getting good overview of results is somewhat difficult. The reason is that the authors have decided to study almost all possible combinations between the participating 9 instruments. The other way to do these comparisons could be that you select one satellite and one ground based instrument as reference instruments.

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Anyway, my other comments are minor and listed below. I can, therefore, recommend the paper for the publication in AMT.

Minor comments:

Sec. 4, line 8: Absolute can be misleading word here.

Sec. 4.1, line 9: It is good that you acknowledge the differences in geolocation definitions. Please, translate these differences to distances in km.

Sec. 4.3, line 24: "midday-measuring instruments (OSIRIS...)". At least originally OSIRIS equatorial crossing times were 6 am and 6 pm.

Fig.2; Subfigures are very small.

Figs. 7, 8, 12: Text and plotting symbols are quite small. It is difficult to retrieve information from these plots.

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Interactive comment on Atmos. Meas. Tech. Discuss., 5, 517, 2012.

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