

***Interactive comment on “MAXDOAS formaldehyde
slant column measurements during CINDI:
intercomparison and analysis improvement” by
G. Pinardi et al.***

Anonymous Referee #2

Received and published: 4 October 2012

This paper presents intercomparison results for HCHO slant columns measurements obtained during a dedicated campaign. The paper is well written and the methodology is very good. All the sources of uncertainties are well evaluated and discussed. This is a nice presentation of how intercomparison analysis must be conducted. I strongly support the publication of the paper, if the minor comments and improvements listed below are taken into account.

Page 5: Can you explain what is a "semi-blind intercomparison"?

Page 6: If I well understand, only the 30° and zenith measurements are kept, because

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measurements with SZA less than 75° are kept. But later on the paper, measurements at lower elevation are presented. There is confusion somewhere. Can you better explain the geometry of the measurements?

Page 7: Can you explain what a "solar IO correction" is?

Page 8 and Figure 3: Are the same errors bars for Figure 3a than for Figure 2b ? If yes, can you indicate this on the figure caption? I am afraid with such large errors bars, which seems larger than the HCHO diurnal variation. It is said that the errors bars are for individual measurements. Then, it is confusing to plot on the same figure the individual errors and the mean values. It could be better to plot the errors bars of the mean values, and to write somewhere the typical error values for the individual measurements. Nevertheless, this is confusing. Is it errors or real measurements dispersion?

Figures 5 and 6: The dashed line is quite confusing. It seems that the lines correspond to "y = x", but can be confused with a real fit following the values given above the figures. Can you indicate this, or even better, put the real fits?

Page 11: Can you describe in more details the "geometrical approximation"?

Page 19: Can you estimate more precisely the effect of "atmospheric noise", in particular by providing an estimate of the error produced by this effect?

Interactive comment on Atmos. Meas. Tech. Discuss., 5, 6679, 2012.

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