Atmos. Chem. Phys. Discuss., 9, S2139–S2140, 2009
www.atmos-chem-phys-discuss.net/9/S2139/2009/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Inter-comparison of four different carbon monoxide measurements techniques and evaluation of the long-term carbon monoxide time series of Jungfraujoch" *by* C. Zellweger et al.

C. Zellweger et al.

Received and published: 15 May 2009

We are thankful to anonymous Referee 2 for the valuable suggestions and appreciate the compliment. For clarity, the suggestions are italicized, followed by our replies. Suggested technical and language improvements have been done and are not included in the following reply. Furthermore, the revised manuscript was proof read by a native English speaker.

The paper is well structured and easy to follow. However, the authors could improve on this by keeping the two topics: "CO trends" [section 3.1] and "field inter comparison of the 4 CO techniques" [section 3.2] in this order also within the abstract and introduction.

The order of the topics was changed in both the abstract and introduction.

"Concentration" and "mixing ratio" do not express the same in a quantitative sense due to their definitions. Consequently, they cannot be interchanged when assigning values in ppb. Furthermore, the term "mole frac-tion" is actually preferred over "mixing ratio". In the case of CO it will then be expressed in nmol / mol (or ppb). Please correct accordingly.

Changed as suggested. The term "concentration" is avoided in the revised manuscript.

Figure 6 could have an (a) and (b) part, where the present CO time series graph will be (a). In addition, a growth rate curve (part b) would be useful to show inter-annual growth variability, instead of merely relying on the linear trend.

We added a growth rate curve in the revised manuscript as suggested.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 2381, 2009.