

Interactive comment on “Tropospheric mercury vertical profiles between 500 and 10 000 m in central Europe” by A. Weigelt et al.

Anonymous Referee #1

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Minor technical issues: Pg 28225, top - It seems to me that the difference between TGM as measured by the 2537B and GEM as measured by the 2537X was low in all cases, but these data are not presented. Does the difference between these two measurements accurately represent GOM? What is the comparison between TGM-GEM and GOM as measured by the denuders? How accurate are the authors' estimation of GOM concentrations? I feel a bit more discussion should be devoted to this. Pg 28228, line 15 - the authors state the differences in the means are significant but no p-value is given. Pg 28230, line 19 - "with the top" is an awkward phrase Pg 28232, line 16 - this phrase begins awkwardly. The word "opposite" should be changed to "in contrast to" Pg 28232, line 21 - if there is a clear jump in the FT to lower GEM concentrations, what does this say about the relative lifetime of GEM in the FT vs. the mixing time of

C9402

the PBL→FT. Would these observations suggest a shorter lifetime for GEM in the FT? Also, where does the missing Hg go? If GEM in the FT is ~ 200 pg m³ lower than in the PBL and yet GOM is only ~ 20 pg m³ at the top of the PBL, the balance must go somewhere or not all forms have been measured. Please comment.

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 28217, 2015.

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