

Interactive comment on “Evaluation of satellite-derived HCHO using statistical methods” by J. H. Kim et al.

Anonymous Referee #2

Received and published: 27 April 2011

The authors use established statistical techniques to compare HCHO from different satellite instruments (GOME, SCIAMACHY and OMI) and to compare HCHO with CO over a region which includes a common biomass burning source. The intended objective of this work is to evaluate satellite measurements of HCHO. At best, the authors are describing a Friday afternoon experiment which is lacking any meaningful insight. This should not be accepted in its current form for publication in ACP.

There is little description of EOF or SVD analysis. These techniques have been used in a number of studies to look at the most prominent modes of variability in satellite data but this study fails to cite any of them.

Given the differences in spatial footprints and overpass times of the different sensors measuring HCHO should I expect any similarity in modes of variability over regions with

C2346

biomass burning? Biomass burning has a strong diurnal variation, as acknowledged by the authors. The different sensors span different years in which biomass burning emissions can vary substantially.

“...a detailed chemical analysis is beyond the scope of this study.” but unfortunately something more than reported is required to make this study worthwhile publishing.

The authors then go on to make rash statements about separating the influence of biogenic and biomass burning contributions to HCHO. Simple-minded data analysis just doesn't work in interpreting such a complicated scene.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 8003, 2011.