

Interactive comment on “Global validation of improved SCIAMACHY scientific ozone limb data using ozonesonde measurements” by J. Jia et al.

Anonymous Referee #2

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This paper is dedicated to validation of SCIAMACHY vertical profiles processed with the scientific UB processor V 2.9 and 3.0 with ozonesonde measurements. The processing algorithms are compared and the influence of their specific features on data quality is discussed. The paper is generally well written. Please find below the comments, which might improve the presentation style. The English of the paper should be also improved.

COMMENTS

P.4818, L.8: “data . . . is” -> “data . . . are”

P.4820, L.7: The paper (Rahpoe et al., 2015) is in AMTD now.

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P.4822, L.10 : A reference on a paper/webpage with an illustration of SCIAMACHY measurement principle would be useful here

P.4824, L.7-8: Please specify the method for conversion from number density to mixing ratio (source of air density data)

P.4825, L.8: “From the vertical resolution” -> “from averaging kernels”

P.4825, L. 19 “A maximum data. . .”?? Please rephrase this sentence.

P.4826, L.7: “Satellite data has” -> have

P.4829, L.1-10: Why the upper altitude is always lower in V.3.0 comparison than in V.2.9 comparisons?

P.4829, L. 7: remove “:” after “that”

P.4830, 1st paragraph: Please discuss also the features below 18 km at southern high latitudes

Figures: I suggest combining similar figures into one/two figures with subplots, for easy view. In particular, Figures 2-7 can be combined into 1 (or 2) figure with panels and indicated stations and processing versions.

The same suggestion on presenting in one figure is for current Figures 13-18. Please improve also quality of Figs. 13-18.

In the caption of Fig.9, please indicate the processing version.

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