

Interactive comment on “Exploring atmospheric blocking with GPS radio occultation observations” by L. Brunner et al.

L. Brunner et al.

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We thank the reviewer for the positive assessment and his helpful comments on our paper. We have included the comments below. Please find our responses highlighted in bold.

1. ...my major criticism is that the figures are far too small to be read in standard size page printout. I had to magnify them many times to see them clearly.

We worked on better readability of all the figures. We split Fig. 1 into two figures, now Fig. 1 and Fig. 2. We enlarged the size of figures, labels, and legends. Please note that the final ACP format will also change to A4 size,

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helping to better present Fig. 1 and Fig. 2.

2. A few suggested edits:

- P. 35801 line 10: replace “preferably” by “preferentially”
We changed this according to the comment.

- P. 35802 line 20: replace “horizontal resolution” by “horizontal footprint”
We discussed this and find that “footprint” is rather used for nadir viewing sounders than for limb sounders such as RO. For this reason we prefer to use “horizontal resolution”.

- P 35804 lines 10, 18, 20: replace “grid points” by “grid cells”
Thank you for this input. We replaced “grid points” by “grid cells” where appropriate.

- P 35809 line 9: add “atmospheric” before “blocking”
We think the reviewer refers to line 14 where we added “atmospheric” before “blocking”.

- P 35809 line 10: Replace “Using an adequate sampling strategy,” with “With about 800 global RO profiles per day,”
We think the reviewer refers to line 15 where we rewrote the sentence to “Utilizing about 800 profiles per day in the NH and applying an adequate gridding strategy, RO data are found dense enough...”

- P 35810 line 14: The statement “RO events are equally distributed over the globe...” is not correct in general. One or two satellites cannot provide global observations. To get global observations, a constellation is required and at least some of the satellites have to be in polar orbit. Thus I suggest rewriting this as: “RO observations from constellations such as COSMIC cover the entire Earth, and can therefore....” (Note that even a constellation

like COSMIC does not provide equal distribution or coverage, there are more in high latitudes than low latitudes.)

We changed this according to the comment.

- P 35810 line 17: Rewrite to “Since RO profiles also sample the lower stratosphere, they can, moreover, provide...”

We changed this according to the comment.

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 15, 35799, 2015.

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