

Interactive comment on “The Radio Occultation Processing Package ROPP” by I. D. Culverwell et al.

Anonymous Referee #1

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General comments:

The paper describes the ROPP. The paper is very well written and provides an excellent overview including some RO data example. As a whole it is a solid piece of work. I recommend publication. I have some minor comments and questions.

Minor comments:

*conclusion (P172,L18): ‘...the intention of this paper is to encourage other RO scientists to use ROPP to process their data’. Suppose, that i have my own software package called XYZ. After reading the paper i am not convinced to switch from XYZ to ROPP because nowhere in the manuscript you point out that ROPP produces high quality RO bending angle/refractivity. For example, on P126,L19 you cite Gorbunov et

C18

al. 2011. At this point you could include some comment on OCC/UCAR comparisons. This brings me to my second comment.

*A single COSMIC profile is processed and you make some comparison with ECMWF. No doubt, ECMWF is a good reference (and you use it in 1dvar), but UCAR is processing COSMIC as well. For this single COSMIC profile it is obvious to show ROPP minus UCAR bending angle/refractivity.

*P163,L5: ‘...ROPP PP provides routines to compute L1 and L2 bending angles from measured excess phase by geometrical optics...’. I think ‘measured’ is not the correct word. Correct me if i am wrong, but i think that the ‘measured’ excess phase you refer to is actually the output of some other preprocessing (see e.g. Sokolovskiy et al. 2009 Postprocessing of L1 GPS radio occultation signals recorded in ol mode, Radio Science). Does the ROPP include such preprocessing, i.e., the L1 preprocessing described on P739-P740 in Gorbunov et al. 2011? In this case, i download the ROPP immediatly (i urgently need some reference preprocessing).

*Figure 2 and 3: ‘...the results of passing “raw” COSMIC data through some of the tools...’ What does “raw” stand for? Is it the same as “atmPhs” downloaded from CDAAC?

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