

Interactive comment on “Identification and localization of layers in the ionosphere using the eikonal and amplitude of radio occultation signals” by A. G. Pavelyev et al.

Anonymous Referee #2

Received and published: 27 June 2011

The paper briefly reviews and presents a method to analyse GNSS RO signals with respect to inclined ionospheric layers by identifying variations at 30–90 km. The topic is suitable for AMTD. The paper is generally well written and the manuscript may be of interest to readers who analyse GNSS signals.

The main point of concern, in my opinion is that both the introduction/review of methods and the presentation of the model strongly refer to literature. Thus the reader has to know and read the literature to fully understand the review, but then it becomes unclear why there is such discussion. The presentation of the model strongly refers to publications, too, so that it remains unclear what is really new in the paper. This must

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be clarified in the revised version, and the model description should be elaborated. I am sure that the rating for "Scientific Quality" can be easily raised to "Good" by the authors.

Minor items: Page 1470: Please provide motivation and more explanation why there are 5 types of ionospheric influence, maybe some reference will help.

Page 1473, line23: why unexpected?

Page 1476, line 23: Pavelyev et al., 2010b.

Language and typos:

Page 1469, line13: suggestion -> the suggestion Page 1469, line13: delete "the" before "inclination" Page 1469, line 16: equations -> the equations Page 1472, line 24: delete "to" after "satisfy" Page 1473, line 1: "to the ray" -> "and the ray" Page 1473, line 10: "to the case" -> "for the case" Page 1464, lines 9 and 26: next -> following Page 1475, line 5: ... in this case we can observe... Page 1477, line 19: delete "to" before "below" Page 1478, line 19/20: Abel transform Page 1479, line 2: m^t3 -> m^3

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