

Interactive comment on “The EISCAT meteor-head method - a review and recent observations” by A. Pellinen-Wannberg

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I thank the Anonymous referee #2 about the comments.

This paper was based on my talk on the Radar Meteor Workshop. I was invited to review EISCAT results and this paper is just a report on my talk for the workshop proceedings. Next my response to the referee.

The last paragraph (describing Figure 2) in section 4 "Overdense head echo scattering process" describes the overdense scattering model as it has been observed with EISCAT dual-frequency measurements, higher VHF than UHF rates, observing the target earlier at VHF than at UHF, smaller target sizes for UHF than VHF if we assume overdense scattering and required high vector velocities. This model has been confirmed with multifrequency results from ALTAIR (Close et al., 2002). Another "underdense model" has been suggested by Mathews et al., 1997, an effect that probably appears

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when using a much more sensitive radar as Arecibo, but cannot be distinguished in EISCAT data, and cannot thus be presented in this paper. In addition, that model is described in many papers today (probably without mentioning the overdense model by Wannberg et al., 1996) and was even presented at the Radar Meteor Workshop. At the UHF/VHF I do not know of further work.

Figure 3: This figure shows the capability of a tristatic radar, the only of its kind in the world. Thus it is very valuable to publish it here and now. We are very keen to keep this multistatic capability, which is not self-evident since the present EISCAT contract runs out 2006. It is a quite complex process to analyse these data taken with a new method, we are for the moment working on the software. Within a year or so we will publish fully analysed data, but do not have it yet today.

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 21, 2004.

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