**Atmospheric
Measurement
Techniques**
Discussions

Interactive comment on "Remote sensing of cloud top pressure/height from SEVIRI: analysis of ten current retrieval algorithms" *by* U. Hamann et al.

Anonymous Referee #1

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This paper describes the outcome of a comprehensive validation 10 different algorithms to retrieve cloud top height from the SEVIRI instrument. The study is a key outcome of the CREW (Cloud Retrieval Evaluation Workshop) . The study demonstrates best practice in validating cloud top height such that the results are clear and unambiguous. This is achieved through the application of a common cloud mask and an assessment of the implications of using a common cloud mask. The validation of CTH is assessed as a function of cloud regime, thin/thick, single layer and multi layer cloud. Explanations for the disagreement and agreement between algorithms and data validation sources are clear and well thought out. The paper is clearly written and the figures are clear. I have just a few minor comments and corrections

Specific comments

In the algorithm description section no reference is made to the surface parameterisations (albedo/brdf) used over land or sea. The sensitivity to thin cloud can be sensitive to this parametrisation so it would be useful to know if there are any differences between the algorithms in this respect.

It would be desirable to have a short more physical explanation of the difference between the CPR and CALIOP data sets and what the implications are on the results i.e is one algorithm more/less sensitive to large particles/ice/water/ thin clouds etc.

Technical corrections

P403 l21 CHT=CTH

P405 l13 nighttime night time

P406 l17 IR (infra red)

P415 l18 what are the 'essential observable properties'

P419 l4 'A large of these' → A large percentage of these

P419 l12 Cannot begin a sentence with Thereby- rephrase

P423 l11 exceptions should also include UKM algorithm

P434 What does the author mean by a general temperature bias in the lower part of the atmosphere, that there is an uncertainty on the NWP temperature profile that is large in this part of the atmosphere?

P436 l9 understanding→ understanding of

P436 l15 is →are

P436 l24 Cannot begin a sentence with also

P437 l6 focus → to focus

P438 l5 route→ root

P438 l16 'probably' is a big vague I suspect 'are required' more appropriate.

P439 l4 subject → the subject

P439 l8 is →are

P439 l24 over→ of