

Interactive comment on “The time-space exchangeability of satellite retrieved relations between cloud top temperature and particle effective radius” by I. M. Lensky and D. Rosenfeld

Anonymous Referee #3

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The paper by Lensky and Rosenfeld addresses a pressing issue relative to their method of retrieving cloud top properties as presented in the Bull. Amer. Meteor. Soc. of 1998 article. Since then, they have successfully used the method and clearly demonstrated its scientific and even operational effectiveness. However, there was no available material on perhaps the most important assumption behind the method, i.e. the ergodicity as applied to the satellite scenes under consideration. It is therefore very appropriate to see that the authors have addressed this topic so that their method will refer to this paper from now on for this important foundation. Having said so, here are specific comments on the paper itself.

Interactive
Comment

- 1) The paper is well within the scope of the journal.
- 2) As said before, the paper, rather than addressing novel concepts and ideas, sets a firm point on an existing satellite retrieval method, a point that was not yet sufficiently covered by the available literature.
- 3) The conclusions are clear and convincing and the method used to explain the science is clear enough and should be more than adequate to explain the physics to the reader. Results and discussions are also supporting the interpretation and conclusions.
- 4) Reference to the available literature is given.
- 5) Figures 3 to 6 (the graphs) are a bit too small and I feel their quality should be improved. They do not come out the way they should both on the interactive version as well as on the printed one.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 11911, 2005.

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