

Interactive comment on “Discriminating raining from non-raining clouds at mid-latitudes using multispectral satellite data” by T. Nauss and A. A. Kokhanovsky

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Thank you very much for your comments.

1.) As mentioned in our reply to the comments of reviewer #2, every optical rainfall retrieval consists of two parts: One part for the identification of precipitating cloud areas (and sometimes also for the identification of the underlying rainfall processes) and one part for the assignment of rainfall rates. Up until now, the rainfall assignment (which is not presented in the article) is similar to the one of Adler and Negri's CST or Reudenbach's ECST and based on 3 D cloud model runs linking the cloud-top temperature to different rain rates. Therefore, the retrieval of precipitation intensity etc. is as possible with this technique as with any other optical rainfall retrieval, but it is not presented in

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this article.

There are two reasons why we did not include the rain rate assignment: First, we want to clearly distinguish between the two parts of an optical rainfall retrieval. This has the advantage, that we can focus on a valid delineation of the precipitating cloud area in a first step. Second, the new approach offers much more insights into rain formation processes than the commonly used cloud-top temperature approaches. Therefore, a separate extensive study has already been started focusing solely on a more reliable rain rate assignment that is no longer entirely based on cloud-top temperatures.

2.) Considering the validity of RADS for less extreme conditions, we have almost finished a comparison study including more than 200 MODIS scenes between January and August 2004. No preselection has been performed for these scenes - they just represent the morning overpasses of Terra-MODIS received at our direct broadcast station in Marburg. This period covers a wide range of meteorological conditions with many scenes that show almost now convective regions. Nevertheless, the rain area delineation works comparably well to the scene presented in the current article.

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