

Interactive comment on “Total and partial cloud amount detection during summermonths 2005 at Westerland (Sylt, Germany)” by N. H. Schade et al.

Anonymous Referee #1

Received and published: 28 August 2008

Review on Total and partial cloud amount detection during summer months 2005 at Westerland by Schade et al

General: The authors compare the accuracy of cloud fraction detection from the surface retrieved from all-sky camera and a longwave downward radiation measurement (APCADA-Algorithm). Both measurements were validated against human observations.

The points of the paper are aimed to show how wrong the APCADA-Algorithm can be for cases with high (cirrus) clouds and to validate the algorithms. The camera retrieval was better (in bias and in score) in both cases of all data and days with no cirrus clouds. As expected the APCADA-Algorithm was far off for all data and better for no-

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

cirrus-cases.

The data and conclusions presented in this paper can be informative and provide a reference for cloudiness measurements from the surface. However the presentation needs to be improved.

In the introduction section: The structure of the paper could be friendlier if the author would state in a clearer way in the introduction what is the scope of the paper (as they do in the summary) and focus the paper on it.

In the Measurements section: On one hand the authors does not give much details on the camera algorithm and on the other hand they give the APCADA equations with no physical explanation and state that the cloud detection is based on the LDR variability. Then 3 empirical thresholds are given for the classification with details in table 1 (not 4 as stated in the text).

The authors should skip the discussion on the APCADA equations (two pages with eq 1 to eq 8 and give more and clear information on the real cloud detection that is based on variability.

It would be nice to have more relevant information on the camera algorithm and to understand why no cosine weighting of the pixel has been applied.

The results and the summary parts are better.

The English should be improved throughout the paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 13479, 2008.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

