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Atmospheric Measurement Techniques Discussions

# *Interactive comment on* "An improved cirrus detection algorithm MeCiDA2 for SEVIRI and its validation with MODIS" *by* F. Ewald et al.

**Anonymous Referee #2**

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The paper is very well written and has an easy-to-follow structure. I have only very minor comments and suggest publication in AMT.

specific comments: title: I am not sure if "validation" is the correct wording as only MODIS data, i.e. also indirect satellite retrievals are used (in a sophisticated way as I recognize) for this purpose. I would suggest the term "evaluation" here unless independent direct cirrus data, e.g. from ground observation networks are used.

p 5273 ll 16ff.: Has there been done anything with IASI, which is in orbit since 2006 (data delivery started in 2007) and has much better quality than AIRS?

p 5276 ll 23f.: How is cirrus defined elsewhere in the literature. I am fully aware that



some authors call all clouds with ice tops "cirrus" and others call only thin ice clouds "cirrus" (which is the correct way to do in terms of synoptical weather observations, by the way). It would be good to have some reference here besides Krebs et al. (2007) for the decision to call all ice top clouds "cirrus" (which I fully understand technically).

p 5277 l 3: what is a "thick cirrus"? COD>2? COD>5, COD>10?

p 5277 l 15: where does the information about the "underlying feature" come from?

p 5280 ll 18-24: Which optical properties are used for cirrus (ice clouds)? Are they applicable globally?

p 5281 l 5: What does "each mu" signify? in 1° steps? in delta_mu=0.1 steps? interpolated?

p 5282 ll 9f.: If it is possible to detect cirrus with tests 1-5 with reasonable quality (high enough to run the further steps on this mask), what is the additional benefit of test 6 then? chapter 5: as suggested for the title I would prefer the wording "evaluation" rather than "validation.

p 5286 ll 1-8: Please introduce the MOD06 and MOD02 products. I assume MOD06 is the level 2 retrieval while MOD02 is level 1 measurements?

p 5287 l 6: MoCiDa1 or MoCiDa2?

p 5289 l 2.: -70°N I assume.

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Interactive comment on Atmos. Meas. Tech. Discuss., 5, 5271, 2012.