

Interactive comment on “Coupling sky images with three-dimensional radiative transfer models: a new method to estimate cloud optical depth” by F. A. Mejia et al.

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Thank you for the comment. We agree with the reviewer and apologize for the oversight. Since the discussion paper cannot be revised until the end of the comment period, the figures in the paper will be corrected for the final revision. In the meantime we have attached figures 8-11 with the correct captions.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 11285, 2015.

C3758

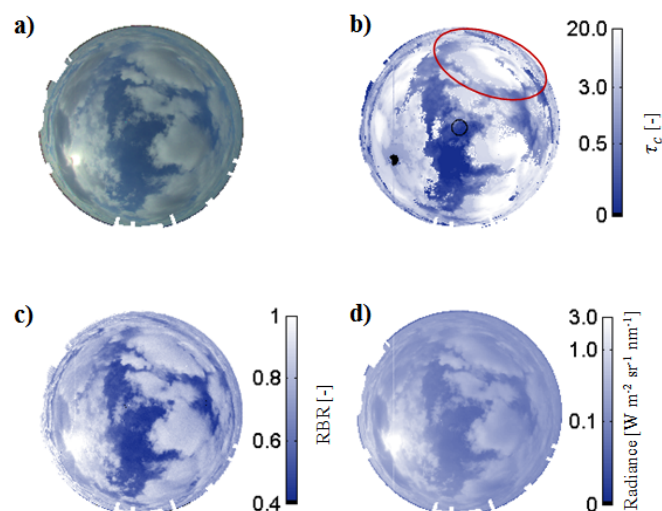


Fig. 8 (a) USI image for 25 March 2013, 22:10:00 UTC, (b) τ_c retrieval from RRBR method, Pixels inside the black ring are the pixels used for averaging and comparison with the MWR (Section 6.4) (c) $RBR^{meas}(\vartheta_s, \vartheta_z)$ and (d) $I_{620}^{meas}(\vartheta_s, \vartheta_z)$. For this scene, the MWR measured a τ_c of 0.56 and the USI measured a τ_c of 0.20, the highest τ_c within 10 minutes of this is 19.4 and 15.3 for the MWR and USI respectively.

Fig. 1.

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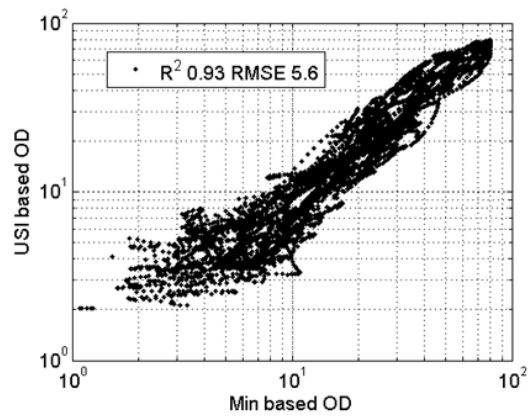


Fig. 9 Comparison of RRBR τ_c retrievals from the sky imager versus the Min method applied to MFRSR measurements for USI cloud fractions greater than 0.7. USI results are averaged over the hemisphere as shown in Eq. 9.

Fig. 2.

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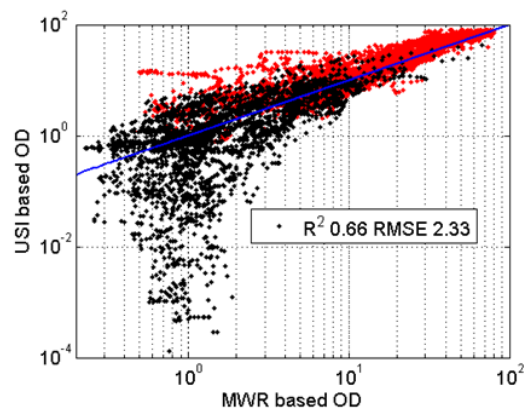


Fig. 10 Comparison of USI RRBR versus MWR measurements of cloud optical depth for CF < 0.7 in black and CF > 0.7 in red.

Fig. 3.

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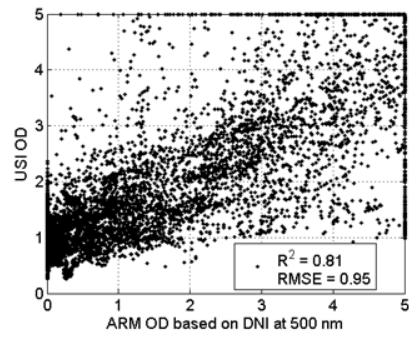


Fig. 11 Comparison of RRBR versus DNI method of cloud optical depth retrieval. Since τ_c becomes unreliable for small DNI $\tau_c > 5$ are identified as $\tau_c = 5$ to illustrate that thick clouds are mostly identified correctly.

Fig. 4.