

Interactive comment on “Performance of the meteorological radiation model during the solar eclipse of 29 March 2006” by B. E. Psiloglou and H. D. Kambezidis

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According to NOAA's records, similar weather conditions prevailed on both 28 and 29 March, namely unaltered wind speeds and directions. As no measurements of the Ångström's turbidity parameter, beta, were available, the 28th of March 2006 (an almost clear-sky day, one day before the eclipse) was selected as reference. Given that from eq. (12), using ASNOA's altitude of 107 m, the value of $(\beta)'$ was found equal to 0.09, a lot of tests were carried out changing the value of $\Delta(\beta)$ in the variation range of 0.02–0.06 as proposed by Yang et al (2001). The best results from MRM estimations for the 28th of March, for both total and diffuse components, were found using the value of $\Delta(\beta) = -0.04$. So the value of Ångström's turbidity parameter, (β) , equal to 0.05 was finally chosen for the Mie scattering transmittance function in

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eq. (10). The model was applied to the following eclipse day, 29 March 2006, using the same value of parameter beta too. Also, in the revised version of our article a comment for Db is added in section 3 about the validation of MRM v5.

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