

Interactive comment on “Oceanic phytoplankton, atmospheric aerosol and Raman scattering impacts on space-based ultraviolet radiance measurements” by R.-M. Hu and R. S. Sokhi

Anonymous Referee #1

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In general this paper is well written and addresses an area of concern for TOMS determination of aerosol single scattering albedo. First, I think a brief discussion of the accuracy of the apparently empirical formulas given for the absorption and scattering coefficients as a function of wavelength for the water impurities should be given. The stated variation effect of the chlorophyll along with the particulate matter is 10% so I would presume the effect of any uncertainties in these coefficients would be considerably less. Of more importance are the uncertainties in the aerosol effects due to uncertainties in the size distribution and vertical profiles. These uncertainties are stated to be about 15% while the total effect of the impurities was given as 10% furthermore, did the calculations consider polarization effects from scattering which can

have a several per cent effect on the results. I believe these questions are important in determining whether the results will improve the retrieval of aerosol single scattering albedo.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 14351, 2007.

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