Atmospheric
Measurement
Techniques
Discussions

Interactive comment on "Determination of land surface reflectance using the AATSR dual-view capability" *by* L. Sogacheva et al.

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Ln. 18: Do you mean "phenologic"? Ln. 20-21: Please, re-phrase more carefully: 3D surface structure causes shadowing, which is a part of the BRDF effect. And any height irregularity will cast a shadow, regardless of its height. Eq. 1: Please reference Chandrasekhar before your colleagues. Also, be more specific: Eq. 1 holds when surface is Lambertian. As applied to anisotropic surface, it is not rigorous. The rigorous analytic solution was provided in Lyapustin, A., and Yu. Knyazikhin, 2001: Green's function method in the radiative transfer problem. I: Homogeneous non-Lambertian surface. Appl. Optics, 40, 3495-3501.

Some confusion arises when you jump between surface reflectance (SR) and albedo.

C1995

As I understand, this work only uses SR and does not compute albedo, which would require knowledge of BRDF model. To avoid confusion, you may discuss the subject of albedo in the introduction, and use only SR thereafter. AATSR has two view zenith angles. I couldn't find, SR for which angle is used in the comparison with ASRVN and with MODIS. Also, which angle compares better – near-nadir or 55ˆ?

Overall, this is a large work without serious technical shortcomings. I suggest publication with minor corrections (see above).

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 7451, 2014.