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Retrieving land surface parameters from MODIS and MISR albedo products

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We present results from the application of an inversion method conducted using both MODIS and MISR derived broadband visible and near-infrared surface albedo products available during a full seasonal cycle. It addresses complex geophysical scenarios involving snow occurrence in mid and high-latitude evergreen and deciduous forest canopy systems. The occurrence of snow during the winter and spring seasons is based on the analysis of the MODIS snow products which assimilation by our package translates into an adaptation of the prior values, both the maximum likelihood and width of the 2-D probability density functions (PDF), characterizing the background conditions of the forest floor. Our results illustrate the capability of the inversion package to retrieve meaningful land vegetation fluxes and associated model parameters (such as the effective LAI) along the year despite the rather high variability in the input products. As a matter of fact, most of this temporal variability, as well as the small differences between the MODIS and MISR broadband albedos, appear to be mostly captured by the albedo of the forest floor. We will discuss results from applications conducted using MODIS and MISR operational surface albedo products over selected EOS validation sites where some ground-based estimates are available.