http://www.atmos-meas-tech.net/7/3497/2014/
doi:10.5194/amt-7-3497-2014-supplement
© Author(s) 2014. CC Attribution 3.0 License.

Supplement of

Effect of surface BRDF of various land cover types on geostationary observations of tropospheric NO₂

K. Noguchi et al.

Correspondence to: K. Noguchi (nogu@ics.nara-wu.ac.jp)
Figure 1: Monthly averages of the MODIS BRDF parameters, $f_{\text{iso}}$, $f_{\text{vol}}$ and $f_{\text{geo}}$ for each land cover type derived by AVNIR-2. The percentage means the threshold of the most frequent AVNIR-2 land cover types (see text).
Figure 2: Relative difference of tropospheric NO$_2$ BAMF for various land cover types from the tropospheric NO$_2$ BAMF obtained using full BRDF treatment compared to results using (a) BRF and (b) WSA surface. Each of the cases includes a panel at local time (LT) 09, LT12 and LT15 for summer (left) and winter (right). The colors indicate land cover types: water (blue), urban (red), rice paddy (light blue), crop (yellow), deciduous forest (light green) and evergreen forest (green). An AOD of 0.2 is assumed.
Figure 3: Difference of the tropospheric NO\textsubscript{2} VCDs for BRF, BSA and WSA from that for BRDF. The VCD for BRDF is assumed to be the true value.
(c) Deciduous forest

![Graphs showing data for Deciduous forest summer and winter.](image)

(c) Evergreen forest

![Graphs showing data for Evergreen forest summer and winter.](image)

(continued.)