

Remote Sensing of Fluxes: Optical Functional Types

Estimating variability of Light Use Efficiency (LUE) for arctic tundra by spectrally unmixing functional types: vascular plants, mosses, and lichens



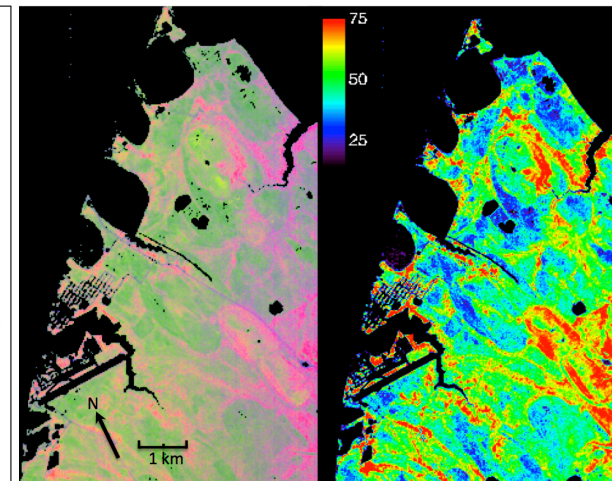
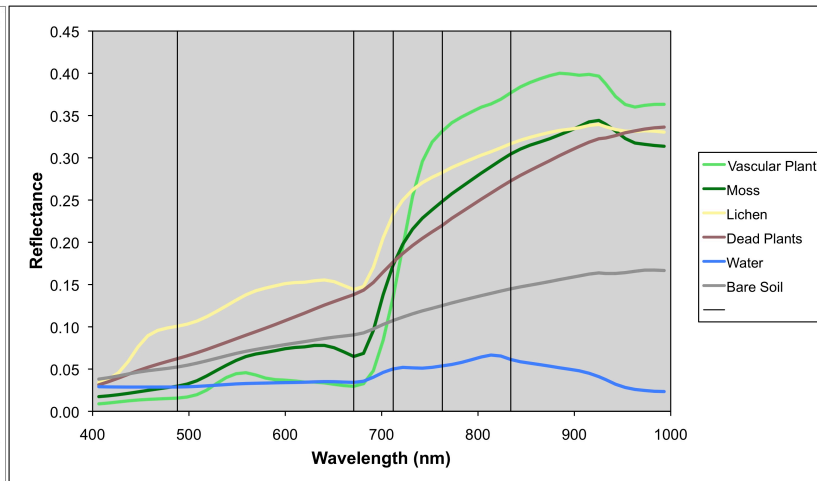
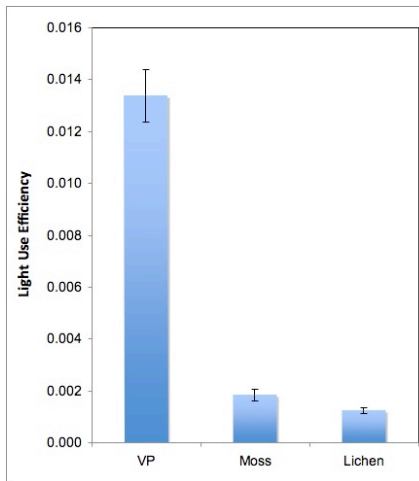
Vascular Plants



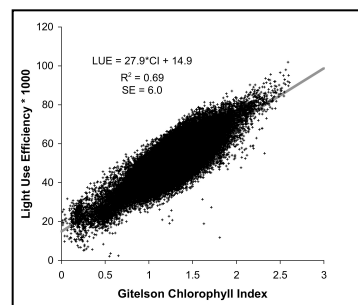
Lichens



Mosses



Plot-level field measurements collected near Barrow, AK determined LUE and spectral characteristics of functional types. Ground measured spectra used as endmembers for unmixing of Hyperion imagery and the derived cover fractions used to calculate regional variations in LUE. Resulting LUE values were strongly correlated with Gitelson Chlorophyll index.



Cover Fractions

LUE

R = Vascular Plant Cover
G = Moss Cover
B = Lichen Cover