



Landscape patchiness in temporal Fourier analyzed satellite (MODIS) data

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Temporal Fourier analysis (TFA) on eight years of MODIS data produced a compact data set of the mean as well as the amplitude and phase of the annual, biannual and tri-annual harmonics of the following products: day and night land surface temperature (LST), 11 and 12 micron emissivity, 0.6, 0.8 and 2.1 micron solar reflectance, enhanced vegetation index and normalized difference vegetation index. These three harmonics represent the seasonal variations. The difference between day and night LST may also reveal the diurnal cycle. Different scales of patchiness were detected. A physical interpretation to the patchiness in the TFA MODIS data will be given here.