



Climatological applications of temporal Fourier analysis on 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. A visual climatological interpretation to the TFA MODIS data will be given here.