



A Case Study of Trends and Spatial Patterns of Land Surface Temperatures over the Greater Los Angeles, CA and Phoenix, AZ using new MODIS LST product (MOD21)

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Understanding the trends and impacts of warming temperatures in urban environments is an increasingly important issue in our changing climate. We used a new standard NASA Land Surface Temperature (LST) product from Moderate Resolution Imaging Spectroradiometer (MODIS), namely MOD21 to analyze day and night LST retrievals to study the trends and patterns of LST over the greater Los Angeles, CA, and Phoenix, AZ, USA. The average warming trend for day and night observations using last 13 years of MODIS Aqua data for LA are investigated. We further investigate the underlying cause of the warming by looking into the physical factors. The results will help to understand how indicators of climate change are evolving in the beginning of the 21st century, and how they compare with global climate model projections. Identification of potential impacts and underlying causes of warming trends in various regions will help decision makers to develop policies to combat the changing climate.