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TITLE: Accessing Recent Trend of Land Surface Temperature from Satellite Observations

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CURRENT SESSION: GC16. Regional Climate Impacts 7. Environmental, Socio-economic and Climatic Changes in Northern Eurasia and their Feedbacks to the Global Earth System: The Role of Remote Sensing and Integrative Studies

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ABSTRACT BODY: Land surface temperature (LST) is an important element to measure the state of the terrestrial ecosystems and to study the surface energy budgets. In supporting the land cover/land use change related international program MAIRS (Monsoon Asia Integrated Regional Study), we have collected the global monthly LST measured by MODIS since the beginning of the missions. The MODIS LST time series have ~11 years data from Terra since 2000 and ~9 years from Aqua since 2002, which makes possible to study the recent climate, such as trend and variability. In this study, monthly climatology from two platforms are calculated and compared. The spatial patterns of LST trends are accessed, focusing on the Asian Monsoon region. Furthermore, the MODIS LST trends are compared with the skin temperature trend from the NASA's atmospheric assimilation model, MERRA (MODERN ERA RETROSPECTIVE-ANALYSIS FOR RESEARCH AND APPLICATIONS), which has longer data record since 1979. The calculated climatology and anomaly of MODIS LST will be integrated into the online visualization system, Giovanni, at NASA GES DISC for easy use by scientists and general public.
http://disc.sci.gsfc.nasa.gov/mairs

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INDEX TERMS: [1637] GLOBAL CHANGE / Regional climate change, [1640] GLOBAL CHANGE / Remote sensing, [9320] GEOGRAPHIC LOCATION / Asia.