



Heat Waves and Cold Spells of the 21st Century

- Surface temperature anomalies computed from the Goddard Earth Observing System Model Version 5 (GEOS-5) at 12.5-km resolution from January 2000 – December 2013 reveal prolonged heat-waves and cold spells across the globe. These anomalies are 7-day running means of local differences from the MERRA-2 reanalysis daily climatology and align with observed extremes throughout the record of observation.
- The increased resolution of the simulation provides additional detail on the regional impacts of these extremes.
- The still images below highlight record warmth across much of North America in March 2007, while Alaska recorded its 3rd coldest March on record. The warmth across the central and eastern US produced premature leaf bloom and was abruptly followed by a severe cold outbreak in early April leading to widespread agricultural damage.



2-meter Temperature Anomaly [K]

