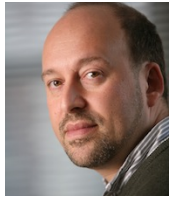


Recent Global Warming As Confirmed By AIRS



Co-Author
Gavin Schmidt

Science Question:

How robust are surface temperature trends derived from weather stations and ocean buoys (such as from NASA GISTEMP)?

Findings:

Surface temperature anomalies from the AIRS instrument on Aqua (2003+) show a very strong correspondence w/GISTEMP over most of the world. AIRS data has more detail, clearly displaying global & regional trends.

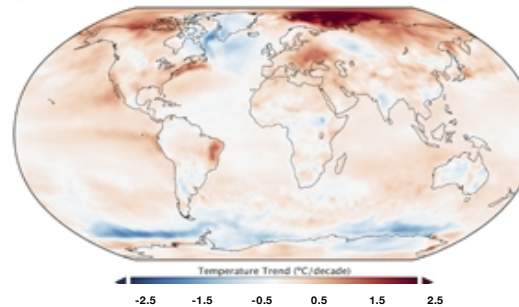
Impact:

AIRS and *in situ* data show that the Earth's surface has been warming globally over this time period, and that 2016, 2017, and 2015 have been the warmest years in the instrumental record, in that order.

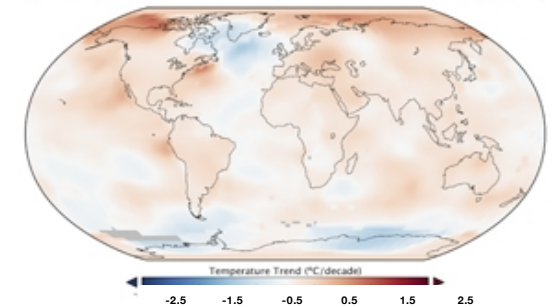
Why does it matter?

Places with less correlation (central Africa, Southern Oceans, Arctic) have sparser station data and may be the cause of underestimating Arctic warming.

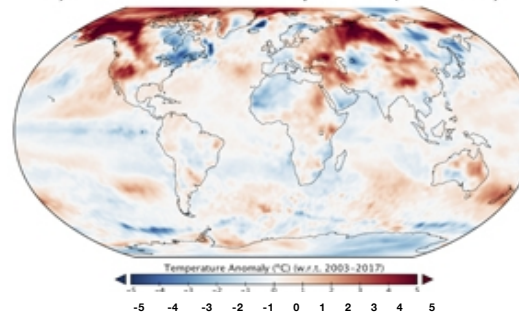
a) AIRS Surface Skin Temperature Trend (2003-2017)



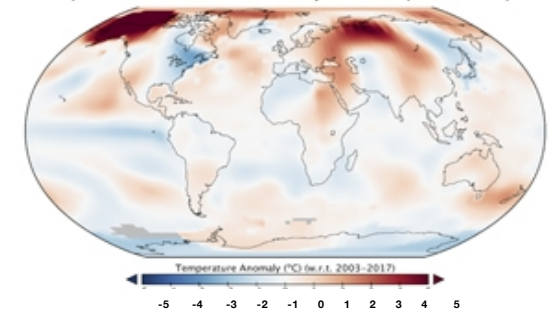
b) GISTEMP Surface Temperature Trend (2003-2017)



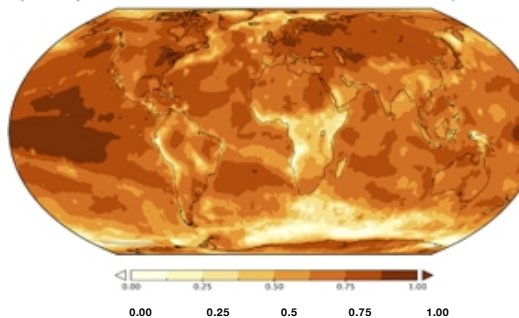
c) AIRS Surface Skin Temperature (Dec 2017)



d) GISTEMP Surface Temperature (Dec 2017)



e) Temporal Correlations AIRS vs GISTEMP (monthly)



f) Temporal Correlations AIRS vs GISTEMP (annual)

