

# The Climate Data Guide and paleoclimate data

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**NCAR**

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH



<http://climatedataguide.ucar.edu>

*Schneider et al., 2013 EOS*

Concise expert guidance on the strengths, limitations and applications of climate data...

# Climate Data Guide

## Typical data portal

Administrator Login

NCAR UCAR | **DASH** Digital Asset Services Hub

air • planet • people

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DASH Search allows users to find, browse, and access digital assets created and published by NCAR and UCAR Community Programs.

Search Data, Software, Models and Publications

Search...

Browse by Resource Type

- collection
- dataset
- image
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- software

data.ucar.edu

NCAR UCAR | **ClimateDataGuide** inform

CLIMATE DATA ANALYSIS TOOLS MODEL EVALUATION EXPERT CONTRIBUTORS

**Data Discovery Guided by Experts >>**  
 Search and access 201 data sets covering the Atmosphere, Ocean, Land and more. Explore climate indices, reanalyses and satellite data and understand their application to climate model metrics. This is the only data portal that combines data discovery, metadata, figures and world-class expertise on the strengths, limitations and applications of climate data. **Discover it now.**

**Data Set Overviews >>**  
 Compare the attributes, strengths and limitations of multiple data sets.

Atmospheric Reanalysis: Overview & Cloud Dataset Overview Comparison Tables

Global Temperature Data Sets: Overview & Comparison Table

Overview: Climate Indices

Precipitation Data Sets: Overview & Comparison table

Sea Ice Concentration data: Overview, Comparison table and graphs

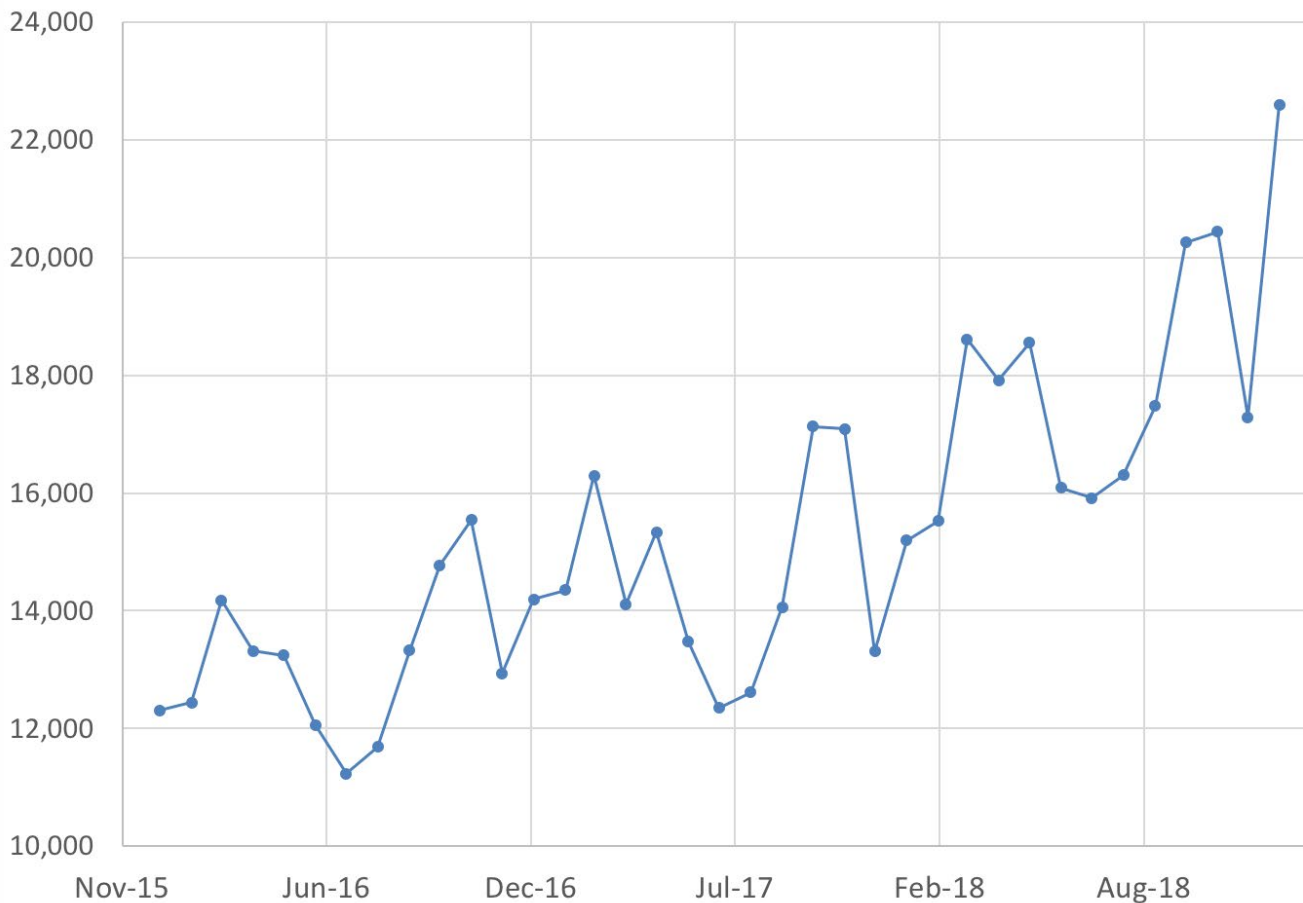
Sea Ice Thickness Data Sets: Overview & Comparison Table

SST Data Sets: Overview & Comparison Table

<http://climatedataguide.ucar.edu>

## Audience Overview

Monthly Users of Climate Data Guide (2016-2018)



### January 2019

22,765 users (Google Analytics)

64,188 page views (Google Analytics)

31,084 unique visitors (server statistics)

## Most popular content

- **Climate indices**, including atmospheric circulation (NAO, NPI, SOI, SAM), Niño SSTs, and drought (PDSI, SPI, SPEI)
- **Global surface temperature** data sets (BEST, UDEL, GISTEMP, NOAA)
- **Atmospheric reanalysis** (ERA-Interim, CFSR, MERRA2, 20CR)
- **Precipitation** data sets (CRUTS, UDEL, GPCC, GPCP, TRMM, PRISM, etc.)

Provides an opening for paleo inasmuch as paleo reconstructs these variables

# Recent contributors of expert guidance

George Huffman – TRMM precipitation

Zeke Hausfather – NOAA global temperature and ERSSTv5

Kevin Cowtan – Berkeley Earth global temperatures

Paul Dirmeyer – soil moisture overview

Claudia Stenbenrauch – cloud data overview

- 75 contributors to date
- \$350. honorarium offered to external contributors (non-NCAR, non-federal)
- On track to reach 100 contributors in 2019

Willis, Josh



*Dr. Josh Willis at NASA/Jet Propulsion Labor*

Argo Ocean Temperature and Salinity Profile

Xie, Pingping

CMAP: CPC Merged Analysis of Precipitation

Yeager, Stephen



*Dr. Stephen Yeager at NCAR*

COREv2 Air-Sea Surface Fluxes

Zhang, Rong

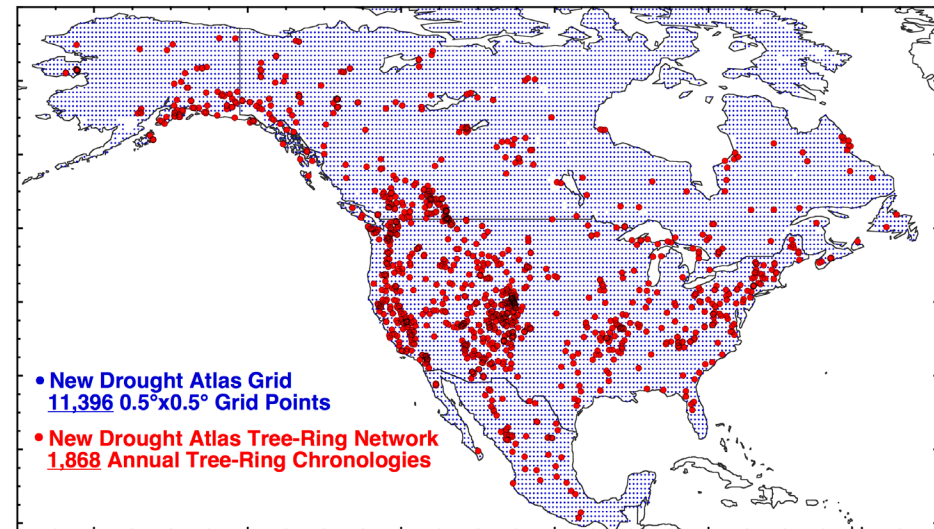


*Dr. Rong Zhang at NOAA/GFDL*

Atlantic Multi-decadal Oscillation (AMO)

## Current and pending paleo content

- Tree-ring drought atlases (Ed Cook)
- Total Solar Irradiance (Joanna Haigh)
- Corals (Kim Cobb)
- More corals (Julie Cole)
- Fire reconstructions/ charcoal (Jennifer Marlon)



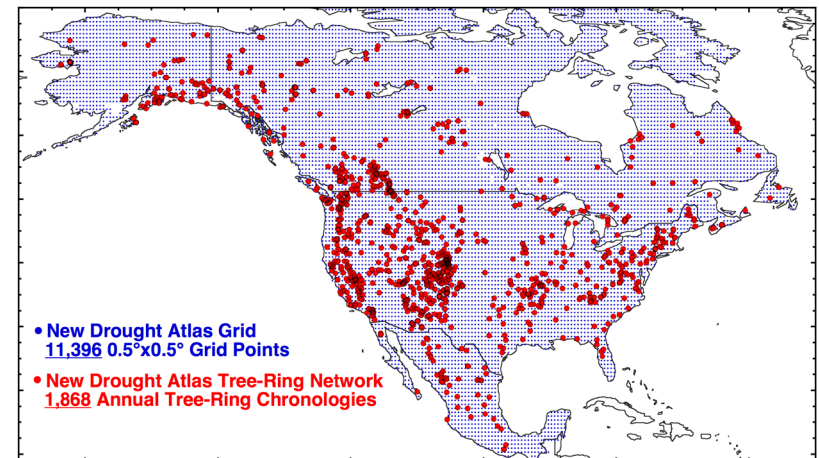
## About me

- 25% NCAR/CAS core activities (Climate Data Guide, DSET/DASH, committees, seminars, etc.)
- 75% grant-funded research (currently Antarctic/ Southern Ocean)
- Background & interests in paleo
  - + Postdoc with Bette Otto-Bliesner & Darrell Kaufman (Arctic 2K synthesis, lake sediments & modeling)
  - + Ph.D. with Eric Steig (reconstruct Antarctic temperature last 200 years, water isotopes from ice cores)



# Potential of funding for paleo content

- Base support
- Collaborate on to university-led proposals as part of broader impacts or Data Management plans
- Small part of a large collaborative data proposal



## Questions about paleo content

What paleo content does the community want on the Guide?

What needs would be fulfilled by the Guide that are not being met by other efforts – PAGES, NOAA-NCEI Paleo Data Center, others?

Happy with back burner project status or try to get funding for it?

The end

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<http://climatedataguide.ucar.edu>

## Concise expert guidance on the strengths, limitations and applications of climate data...

Do we trust the obs? (e.g. spurious trends, different sensitivities of satellite algorithms)

Which dataset to use? (out of a dozen precipitation datasets, which is the best one for me?)

Are the data comparable with model output? (e.g. clouds in a model vs. clouds in satellite obs)