Shaken or Stirred: How do you want your climate data?

Rennie, Jared
Cooperative Institute for Climate and Satellites – North Carolina

The demand for weather, water, and climate information has been high, with an expectation of long, serially complete observational records in order to assess historical and current events in the Earth's system. While assessments have been championed through monthly and annual State of the Climate Reports produced at the National Centers for Environmental Information (NCEI, formerly NCDC), there is a demand for near–real time information that will address the needs of the atmospheric science community. The Global Historical Climatology Network – Daily dataset (GHCN–D) provides a strong foundation of the Earth's climate on the daily scale, and is the official archive of daily data in the United States. Major variables include direct observations of temperature, precipitation and snowfall. The dataset adheres to a strict set of quality assurance, and lays the foundation for other products, including the 1981–2010 US Normals. While a very popular dataset, GHCN–Daily is only available in ASCII text files, and very little visualization is provided to the end user.

A suite of algorithms has been developed that will take advantage of the spatial and temporal completeness of GHCN–Daily. These packages have been built with the end–user in mind, and include derived products, user friendly formats, and eye–catching visualizations. A brief overview will be provided, and the following questions are a subset of what will be asked to ensure end user needs are met:

- What weather variables (original or derived) do you need to meet day to day operations?
- What kinds of visualizations do you want to see?
- How important is timescale? For example, do you prefer hourly data over daily data?
- How technical do you want the data (i.e. statistics, probability, uncertainty)?
- Is there anything you wish we did as an authoritative source of historical weather and climate data?

We hope a discussion can be started with users to help provide the best climate information to them, while at the same time make our products better, robust, and easier to obtain.