

Confronting Models with Observations.

Where do those pretty graphics come from, anyway?

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There is no doubt that spatially and temporally complete "datasets" are highly interpretable and have led to tremendous understanding and make for some remarkable visualizations. The observations that are the basis for these datasets are much harder to interpret, are scattered spatially and temporally, and have many different forms of observational errors. However, the observations are our only realization of the true physical process of interest, be it the ocean, atmosphere, land surface ... whatever.

Data assimilation has been accurately described as "confronting models with observations".

DART is a community facility for ensemble data assimilation (DA) developed and maintained by the Data Assimilation Research Section (DAReS) at the National Center for Atmospheric Research (NCAR). The talk will contain an overview of ensemble data assimilation from the DART perspective and a tour of some current projects using DART to confront atmospheric models, oceanic models and land models with real, ugly, complicated, and problematic observations. Did I mention there's no single answer? An ensemble assimilation is considered to be a success when the truth is indistinguishable from the rest of the ensemble states. There is no *single* spatially- and temporally-complete "dataset" that is THE TRUTH.