

Call for Abstracts

Conference Objectives

1. Sharing understanding of the major challenges facing reanalyses: the changing observing system and Integrated Earth system.
2. Assessing the state of the disciplinary atmospheric, ocean and land reanalyses, including the needs of the research community for weather, ocean, hydrology and climate reanalyses.
3. Reviewing the new developments in reanalyses, models and observations.



Conference Venue

Crowne Plaza Washington DC/Silver Spring
8777 Georgia Avenue
Silver Spring, Maryland 20910 USA

Situated in the heart of the art and entertainment district of Silver Spring, the Crowne Plaza is within walking distance of shops, restaurants, and the Silver Spring Metro Station.

The location is ideal for exploring the nation's capital, and the Red Line Metro can quickly transport you to downtown Washington, DC to see the White House, National Zoo, Smithsonian museums and monuments.

Important Deadlines

Abstract Submittal: 6 January 2012
Early Bird Registration: 13 February 2012
Hotel Reservations: 13 March 2012

Conference Themes

Status and Plans: Major international reanalysis development, including broad disciplinary overviews (e.g., atmosphere, oceans, hydrology, cryosphere).

Validation and Metrics: Intercomparison and validation studies; assessing the impact of the assimilation and analysis increments; innovative diagnostics that characterize the degree to which a reanalysis represents reality and ultimately applicability for weather and climate research.

Data Assimilation: Data assimilation techniques and impact on eventual reanalysis data products, especially producing a climate quality time series.

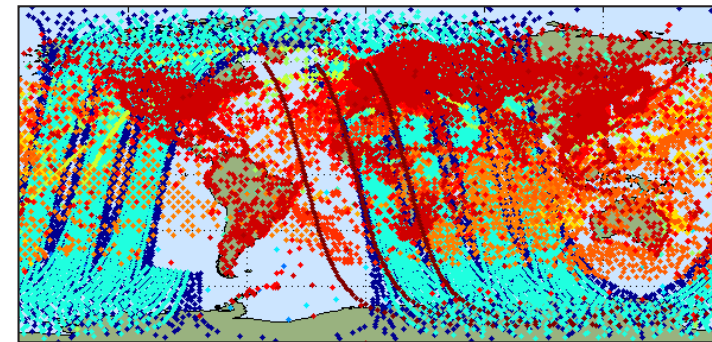
Space and In Situ Observations: Studies on the quality and stewardship of observations and their use in reanalyses and exploiting new data types and sources.

Applications in Support of Climate, Weather and Environmental Services: Innovative research using reanalysis to study the weather, ocean, hydrology and climate, including operational climate monitoring, study of extremes and high impact weather, climate assessment and end-to-end decision making studies.

International Collaborative Efforts: Projects and plans for developing and using reanalysis to the benefit of the international community.



4th World Climate Research Programme International Conference on Reanalyses



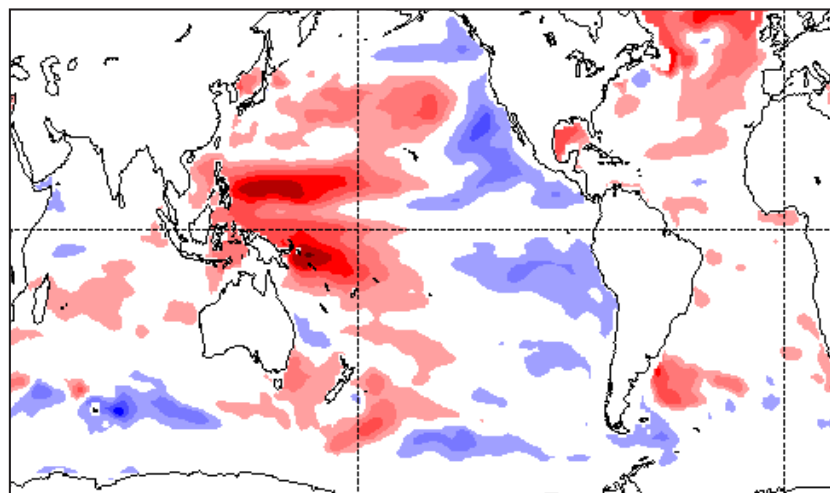
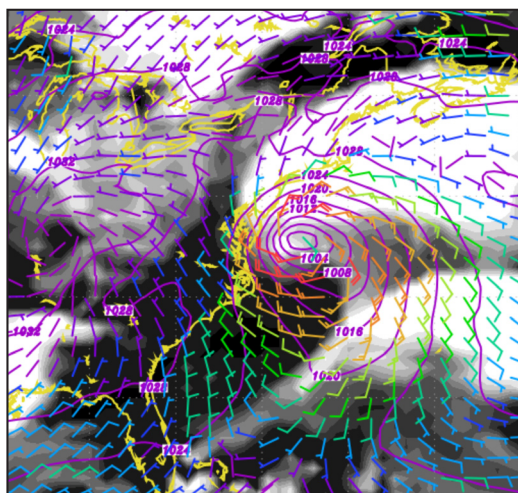
Silver Spring, Maryland USA
7-11 May 2012

<http://icr4.org>

Reanalyses: An Earth System Approach to Weather and Climate Data Integration

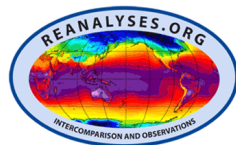
Reanalyses represent a method of integrating satellite and in situ observations with models to produce continuous fields of global weather and climate data. Over the last 20 years, reanalyses have been a significant source of data for many studies of the atmosphere and ocean circulations at time scales from hours to decades. The data assimilation systems that provide the integration tools have improved over time with better models, data assimilation techniques and computer advances. New generations of reanalyses are providing higher resolution, more detailed output for diagnostic analysis and coupling between components of the Earth system. Observations are the essential element of reanalyses. Surface pressure, representing the column integrated mass of the atmosphere, is available from the late 1800s. Sounding balloons became routinely and widely available in the 1940s. Satellite observations with reliable frequency and quality began around

Ongoing Reanalyses Represent a Critical Element of a Climate Information System



The resulting reanalyses products provide continuous weather and circulation data. Additionally, parameters not routinely observed, if at all, are derived from the background forecast models. The future challenge is developing climate trend reanalyses.

1979. Ocean observations have likewise improved in time, where XBTs and CTDs extended the depth of measurements from 300 m to 500–1000m in 1960. Satellite estimates of sea surface temperature and altimetry began in 1981 and 1992, respectively. In 2000, Argos observations began recording temperature and salinity to a depth of 2 km. Reanalyses integrate these into a unified set of data products to be used by researchers and other decision makers.



Reanalyses products are very valuable to researchers. However, they require thorough evaluation for each of the applications envisioned for them.

Given their diversity and data volume and the wide range of potential applications, evaluations have to be undertaken by the broader community, as well as by the organizations producing them. To facilitate sharing of knowledge among the developers and users of these data sets, **reanalyses.org** has been established as a community wiki, where information and research results can be shared openly. The open nature of the page is a compromise between the thoroughness of peer review process and the

length of time it takes to publish information. Further, **reanalyses.org** provides a central source of information across the multitude of reanalyses, linking many sources of information through a central hub. This is a pilot project to gauge the community interest in sharing resources such as this, and will thrive only with the support of the community of developers and users.

Available Reanalyses for Atmosphere

ECMWF Reanalysis (ERA-40): Sep 1957–Aug 2002

ECMWF Interim Reanalysis: 1979–Present

Japanese 25-year Reanalysis (JRA-25): 1979–Present

NASA Modern Era Reanalysis for Research and Applications (MERRA): 1979–Present

NCEP Climate Forecast System Reanalysis (CFSR): 1979–Present

NCEP/DOE Reanalysis II: 1979–Present

NCEP/NCAR Reanalysis I: 1948–Present

NOAA-CIRES 20th Century Reanalysis V2 (20CR): 1871–2008

Available Reanalyses for Ocean

ECCO – GODAE, JPL: 1992–Present

GECCO: 1952–2001

HOPE-ECMWF: 1959–Present

SODA: 1871–Present

NCEP GODAS: 1980–Present

NCEP CFSR GODAS v2: 1979–Present

GFDL: 1980–Present

GMAO: 1960–Present

CNRS-CERFACS GLORYS2: 1992–2009

HYCOM NOPP: 2003–Present

Visit reanalyses.org for data availability and each project's science priorities.