

THE IERS GLOBAL GEOPHYSICAL FLUIDS CENTER

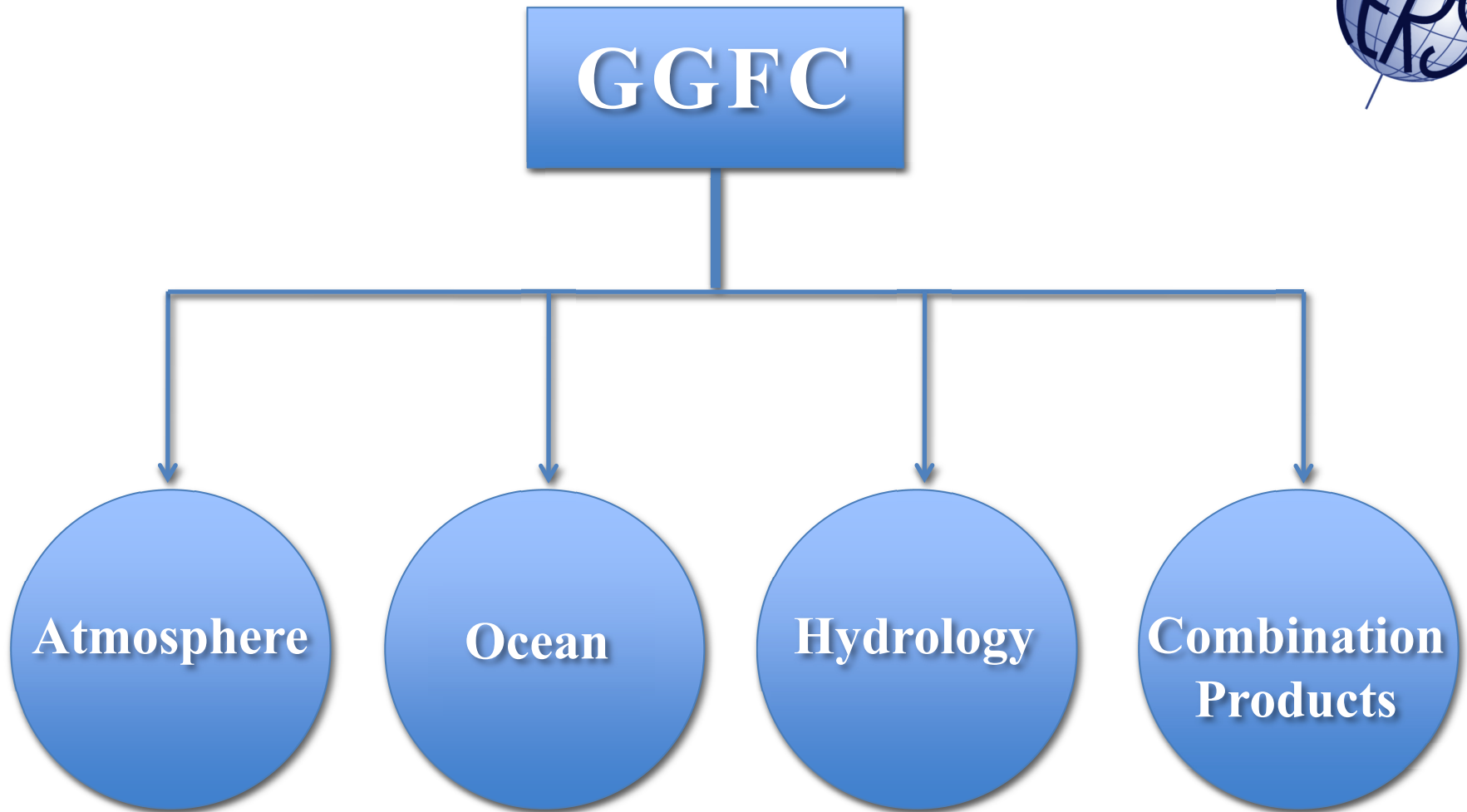


Special Bureau for Hydrology

Jianli Chen

Center for Space Research, University of Texas at Austin





Special Bureau for Hydrology



- ❑ To collect and distribute data sets and numerical model results related to the redistribution of water over the planet, especially over land, that are of interest to the geodetic community.
- ❑ To focus on data sets and model results which provide generally complete global measures of water mass redistribution.
- ❑ To provide global hydrological data in forms that will allow useful comparisons with geodetic variations, such as earth rotation and gravity field changes.
- ❑ To provide global hydrological data in forms that will allow useful connections with model and data results from other GGFC subcenters.
- ❑ To develop working relationships with hydrological modeling groups, in order to compute geodetically interesting quantities directly during model computations.



<http://www.csr.utexas.edu/research/ggfc/>

Data Products



- ❑ Global terrestrial water storage (TWS) change grids from major climate and land surface models (NCEP, ECMWF, GLDAS, LadWorld, CPC, ...)
- ❑ Global surface mass change grids from GRACE time-variable gravity measurements
- ❑ Spherical harmonics coefficients from numerical models TWS estimates (available upon request)
- ❑ Hydrological excitations of polar motion and LOD from models
- ❑ Global major artificial reservoirs' capacities
- ❑ Links to other hydrology-related data products at other institutes





Welcome to the GGFC Hydrology Bureau

Welcome to the GGFC Hydrolog...

www.csr.utexas.edu/research/ggfc/dataresources.html

Horde :: Log in Sciences Finance UT Austin Banking Personal Search News shopping Bookmarks

THE IERS GLOBAL GEOPHYSICAL FLUIDS CENTER

Special Bureau for Hydrology

Data Resources
(Updated: Dec. 28, 2011)

Parameters	Sources	Information
Global Mass Change From GRACE (Release 04)	GRACE (Gravity Recovery And Climate Experiment)	Time Span: Apr. 2002 - Sept. 2011 Sampling Rate: Monthly, 109 Solutions CSR RL04 (GSM only, GAC not restored) Grid: 1 x 1 Degree Grid Decorrelation + 500 km Gaussian Smoothing Truncation at degree 60
Global Mass Change From GRACE (Release 01)	GRACE (Gravity Recovery And Climate Experiment)	Time Span: Apr/May 2002 - Jul 2004 Sampling Rate: Monthly, 22 Solutions CSR RL01 Unconstrained Grid: 1 x 1 Degree Grid Gaussian Smoothing: 600, 800, 1000 km Truncation at degree 60, No C20
GLDAS Monthly Water Storage (New!)	NASA Global Land Data Assimilation System	Time Span: Jan. 1979 - Aug. 2011 Sampling Rate: Monthly Grid: 1 x 1 Degree Units: mm of water height
GLDAS Daily Water Storage	NASA Global Land Data Assimilation System	Time Span: Jan. 1, 2002 - May 31, 2007 Sampling Rate: Daily Grid: 1 x 1 Degree Units: mm of water height
NOAA LadWorld Monthly Water Storage	NOAA LadWorld (Fraser)	Time Span: Jan., 1980 - Nov., 2006 Sampling Rate: Monthly Grid: 1 x 1 Degree Units: mm of water height
CPC Monthly Water Storage	CPC Land Data Assimilation System	Time Span: Jan. 1948 - Dec. 2007 Sampling Rate: Monthly Grid: 1 x 1 Degree
NCEP Daily Water Storage	NCEP/NCAR Reanalysis Soil Moisture and Snow	Time Span: Jan. 1979 - Dec. 2004 Sampling Rate: Daily Grid: Gaussian (T62), ~1.904 x 1.875 Degree
ECMWF Daily Water Storage	ECMWF Reanalysis Soil Moisture and Snow	Time Span: 1979 - 1993 Sampling Rate: Daily Grid: 2.5 x 2.5 Degree
Water Storage	NCEP/NCAR Climate Data Assimilation System I (CDAS-1) soil moisture and snow	Time Span: 1993 - 1998 Sampling Rate: Monthly Grid: 1 x 1 degree
Water Flux	NCEP/NCAR Climate Data Assimilation System I (CDAS-1) soil moisture and snow	Time Span: 1993 - 1998 Sampling Rate: Monthly Grid: 1 x 1 degree

Comments:
Web Curator: [Jana Chen](#)
Last updated: Dec. 28, 2011

Special Bureau for Hydrology
GGFC

Global grids of loading derived from the GLDAS water storage model (from Dr. Tonie M. van Dam).

GFZ Operational AAM (plus OAM & HAM) Products!

Daily hydrological excitations of polar motion and LOD from NCEP/NCAR Reanalysis (1948-2008)!

