

Ocean WRIT: Web Based Reanalysis Intercomparison

<https://psl.noaa.gov/data/writ>

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Background

Tools for mapping, time-series, and creating spatial correlation plots using ocean reanalyses, observational datasets, and climate indices.

Reanalyses

Reanalyses	Horizontal resolution	Time range	Vertical Resolution
NCEP GODAS	418x360	1979-present	40 levels
UMD SODA3 JRA-55	330x720	1980-2017	50
UMD SODA3-ERA	130x720	1980-2019	50
GLORYS	4320x24	1993-2018	50
EC ORA20C	4320x2441	1993-2018	42
EC ORAS5	180x360	1979-2018	75
NASA ECCO V4r4	720x360	1992-2017	50
CERA20C (few vars)	240x121	1901-2010	42

Observed

Dataset	Horizontal resolution	Time range	Vertical resolution
HadISST 1.1	360x180	1870-present	N/A
NOAA OI SST	360x180	1981-present	N/A
NOAA ERSSTv5	180x89	1854-present	N/A
GPCP v2.3	144x72	1979-present	N/A
UK EN4	173x360	1880-2017	42

Depth data interpolated to same 1x1, 18 vertical level grids

Supplied Time-series Examples

- AO: Arctic Oscillation R1 (NOAA/CPC) 1950-present
- AO: Arctic Oscillation 20CRV2C (NOAA PSL) 1871-present
- SOI: Southern Oscillation Index (CRIU) 1866-present
- Nino 12: HadISST1.1 (NOAA PSL) 1870-present
- Nino 3.4: HadISST1.1 (NOAA PSL) 1870-present
- Nino 3.4: HadISST1.1 (NOAA PSL) 1870-present
- ALBSA: Aleutian Low and Beaufort Sea Anticyclone (NOAA PSL) 1948-present
- PDO: Pacific Decadal Oscillation (U Washington) 1900-present
- PDO: Pacific Decadal Oscillation (NOAA PSL) 1891-present
- NGPO: North Pacific Gyre Oscillation (U Georgia) 1950-present
- SH Ice Extent (NSIDC): 1978-present
- Atlantic Hurricane Days (Klotzbach) 1851-2018
- Atlantic Hurricane ACE (Klotzbach) 1851-2018
- San Diego Tidal Index (PSL) 1906-2020
- Honolulu Tidal Index (PSL) 1905-2020...

Tidal Station Data from PMSL: 1600+ stations available

<https://psl.noaa.gov/data/tidal/>
1600+ Global Monthly Time-series

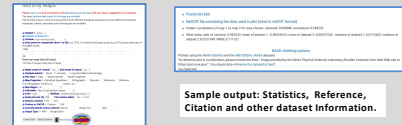
As far back as 1807 and many ending in 2020

User Time-series Upload

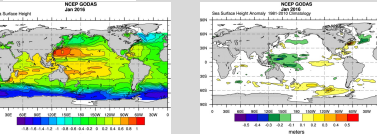
- User upload time-series to ftp.cdc.noaa.gov
- User Selects "Custom Timeseries"
- Enters Path /Public/incoming/timeseries/filename
- Enters Desired Title

Composites

Plot maps and depth plot for monthly data. Compare reanalyses and observed or each other. Plot means, anomalies, climatologies. Compare different time periods.

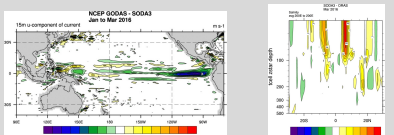


Sample output: Statistics, Reference, Citation and other dataset information.



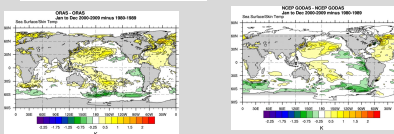
Simple GODAS SSH Plot for Jan 2016

GODAS Anomaly SSH Plot for Jan 2016



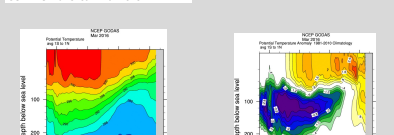
Reanalyses comparisons: GODAS vs SODA 15m u for Jan-Mar 2016

Reanalyses comparisons: ORAS5 vs SODA 15m u for Jan-Mar 2016



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Reanalyses comparisons: GODAS vs SODA 15m u for Jan-Mar 2016

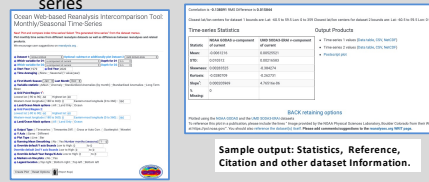


Reanalyses comparisons: GODAS vs SODA 15m u for Jan-Mar 2016

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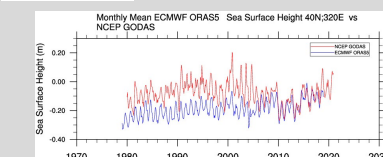
Time-series

Create, compare, and analyze timeseries created from gridded datasets and pregenerated time-series

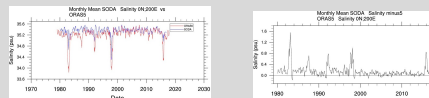


Sample output: Statistics, Reference, Citation and other dataset information.

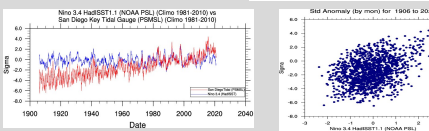
One Page Web Interface



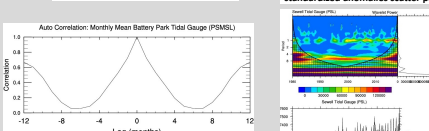
SSH at 40N, 320E (N Atlantic) for 2 datasets reanalysis datasets



ORAS5 vs SODA3 Salinity, tropical pacific



Nino 3.4 vs San Diego Tidal Gauge standardized anomalies



Auto Correlation: Monthly Mean Batter Park Tidal Gauge (PMSL)

Autocorrelation Batter Park Tidal Station Data

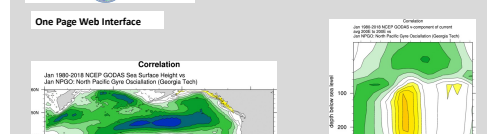
Wavelet Analysis Sewell Tidal Data

Correlation

Create correlation maps and depth plots or trends using supplied timeseries or uploading your own. Can do lead/lag plots.

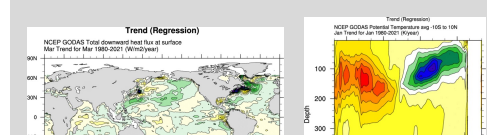


Sample output: Statistics, Reference, Citation and other dataset information.



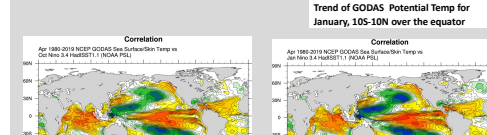
Correlation v current with the NGPO in January at 2006

Correlation SSH with the NGPO in January



Trend of GODAS March Heat Flux

Trend of GODAS Potential Temp for January, 10S-10N over the equator



Correlation of Oct Nino3.4 with following April SST

Correlation of Jan Nino3.4 with following April SST