

Accessing Data for the Climate Prediction Tool

- Data for use with the CPT is available via the IRI Data Library.
- The following slides demonstrate how to:
 - Access data
 - Create seasonal and ensemble averages
 - Download data in the CPT gridded data format

To start the example go to the IRI Data Library:
<http://iridl.ldeo.columbia.edu>



Accessing Sea Surface Temperature Data

IRI/LDEO Climate Data Library

The IRI/LDEO Climate Data Library contains over 300 datasets from a variety of earth science disciplines and climate-related topics. It is a powerful tool that offers the following capabilities at no cost to the user:

- access any number of datasets;
- create analyses of data ranging from simple averaging to more advanced EOF analyses;
- monitor present climate conditions with maps and analyses in the [Maproom](#);
- create visual representations of data, including animations;
- download data in a variety of commonly-used [formats](#), including GIS-compatible formats.

Are you new to the world of climate data? Check out our [Introduction to Climate Data](#) page.

What's New

- Mar 06 - Data from the Global Ocean Data Assimilation System ([GODAS](#)) added
- Feb 06 - Latest [monthly](#) and [pentad](#) CPC Merged Analysis of Precipitation (CMAP) datasets added (November and December 2005 releases)
- Feb 06 - Monthly gridded precipitation dataset for N. South America, Central America, Caribbean Islands, Mexico and S. United States from the Universidad Nacional Autónoma de México ([UNAM](#)) added
- Oct 05 - Updated version of [Servain's tropical Atlantic SST and pseudo-stress data](#) (processed at FUNCEME) added
- Sep 05 - [CMORPH 3-hourly precipitation estimates](#) dataset from CPC added
- Sep 05 - [1-Degree Daily \(1DD\)](#) version of precipitation estimates from NASA's Global Precipitation Climatology Project (GPCP) added

Finding Data

- [Datasets by Category](#)
- [Datasets by Source](#)
- [Dataset Search](#)

Help Resources

- [Introductory Tutorial](#)
- [Statistical Analysis Tutorial](#)
- [Ingrid Function Documentation](#)

Monitoring Global Climate

[Map Room](#)

A collection of maps and analyses used to monitor climate conditions. Click on any of the maps to modify the figures or access the source data.

[Climate Information Digest](#)

A monthly publication covering global climate events, their impacts and the seasonal forecast.

[ENSO Web](#)

Information about El Niño-Southern Oscillation.

[Climate Highlights](#)

Relates headlines from the CID with likely future conditions.

Select the *Datasets by Category* link.



Accessing Sea Surface Temperature Data

Datasets By Category

The links below direct you to a brief description of each dataset along with its spatial and temporal limits and resolution. If you can not find data that meets your needs in the categories below, then you may wish to search for it via either the Dataset Searches or Datasets by Source discovery methods (links shown in navigation banner to the left).

Finding Datasets

- [By Category](#)
- [By Source](#)
- [By Search](#)

help@iri

[Air-Sea Interface](#) - Datasets focusing on the boundary between the atmosphere and the ocean. Includes sea surface temperature (SST) and wind stress data variables, among others.

[Atmosphere](#) - Datasets focusing on parameters describing the atmosphere. Includes surface weather observations (e.g., temperature, precipitation, etc.) and gridded satellite-measured data variables, among others.

[Climate Indices](#) - Datasets focusing on climate indices. Includes drought indices and teleconnection indices such as the Southern Oscillation Index (SOI), North Atlantic Oscillation (NAO), and Niño 3.4, among others.

[Cloud Characteristics and Radiation Budget](#) - Datasets focusing on parameters describing clouds and the radiation budget. Includes outgoing longwave radiation (OLR), albedo, and cloudiness parameters, among others.

[Fisheries](#) - Dataset focusing on fishing ecosystems and industry. Includes catch statistics and economic and environmental data variables, among others.

[Forecasts](#) - Datasets focusing on climate forecast data. Includes IRI Seasonal Forecasts, among others.

[Historical Model Simulations](#) - Datasets focusing on the recreation of historical data records by model simulations. Includes the NCEP-NCAR Reanalysis and ECHAM4.5, among others.

[Hydrology](#) - Datasets focusing on hydrological parameters. Includes drainage area and streamflow data variables, among others.

[Ice](#) - Datasets focusing on station data from the Arctic and chemical measurements from ice cores.

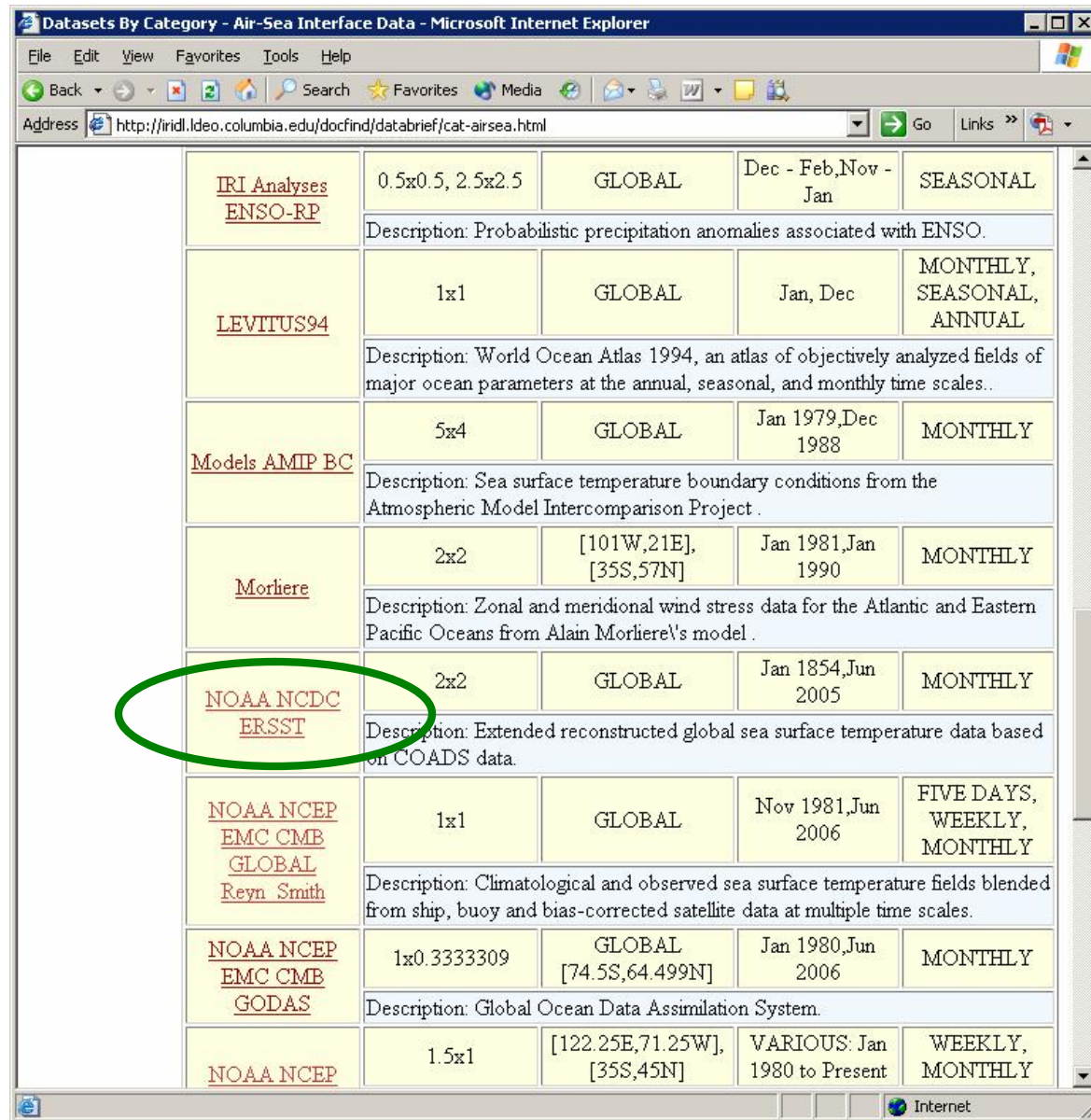
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Internet

Select the *Air-Sea Interface* link.



Accessing Sea Surface Temperature Data



The screenshot shows a web browser window titled "Datasets By Category - Air-Sea Interface Data - Microsoft Internet Explorer". The address bar shows the URL: <http://iridl.ldeo.columbia.edu/docfind/databrief/cat-airsea.html>. The main content is a table listing various datasets. The row for "NOAA NCDC ERSST" is circled in green.

IRI Analyses ENSO-RP	0.5x0.5, 2.5x2.5	GLOBAL	Dec - Feb, Nov - Jan	SEASONAL	Description: Probabilistic precipitation anomalies associated with ENSO.
LEVITUS94	1x1	GLOBAL	Jan, Dec	MONTHLY, SEASONAL, ANNUAL	Description: World Ocean Atlas 1994, an atlas of objectively analyzed fields of major ocean parameters at the annual, seasonal, and monthly time scales.
Models AMIP BC	5x4	GLOBAL	Jan 1979, Dec 1988	MONTHLY	Description: Sea surface temperature boundary conditions from the Atmospheric Model Intercomparison Project.
Moriere	2x2	[101W,21E], [35S,57N]	Jan 1981, Jan 1990	MONTHLY	Description: Zonal and meridional wind stress data for the Atlantic and Eastern Pacific Oceans from Alain Moriere's model.
NOAA NCDC ERSST	2x2	GLOBAL	Jan 1854, Jun 2005	MONTHLY	Description: Extended reconstructed global sea surface temperature data based on COADS data.
NOAA NCEP EMC CMB GLOBAL Reyn Smith	1x1	GLOBAL	Nov 1981, Jun 2006	FIVE DAYS, WEEKLY, MONTHLY	Description: Climatological and observed sea surface temperature fields blended from ship, buoy and bias-corrected satellite data at multiple time scales.
NOAA NCEP EMC CMB GODAS	1x0.3333309	GLOBAL [74.5S,64.499N]	Jan 1980, Jun 2006	MONTHLY	Description: Global Ocean Data Assimilation System.
NOAA NCEP	1.5x1	[122.25E,71.25W], [35S,45N]	VARIOUS: Jan 1980 to Present	WEEKLY, MONTHLY	

Select the *NOAA NCDC ERSST* link.



Accessing Sea Surface Temperature Data

dataset: NOAA NCDC ERSST - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address <http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCDC/.ERSST/> Go Links

NOAA NCDC ERSST options [Help](#) [Expert Mode](#)

served from [IRI/LDEO Climate Data Library](#)

[SOURCES](#) [NOAA](#) [NCDC](#) [ERSST*](#)

NOAA NCDC ERSST

NOAA NCDC ERSST: Extended reconstructed global sea surface temperature data based on COADS data.

Documents

[overview](#) an outline showing sub-datasets of this dataset

Datasets and variables

[version1](#) Extended reconstructed global sea surface temperature data based on COADS data.

[version2](#) Improved extended reconstructed global sea surface temperature data based on COADS data.

Last updated: *Wed, 09 Nov 2005 19:01:10 GMT*

NOAA NCDC ERSST version2: Improved extended reconstructed global sea surface temperature data base Internet

Select the *version2* link.



Accessing Sea Surface Temperature Data

dataset: NOAA NCDC ERSST version2 - Microsoft Internet Explorer

Address <http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCDC/.ERSST/.version2/>

NOAA NCDC ERSST version2 options [Help](#) [Expert Mode](#)

[Data Selection](#) [Data Downloads & Files](#) [Data Tables](#)

served from [IRI/LDEO Climate Data Library](#)

[SOURCES](#) [NOAA](#) [NCDC](#) [ERSST](#) [version2](#)

NOAA NCDC ERSST version2

NOAA NCDC ERSST version2: Improved extended reconstructed global sea surface temperature data based on COADS data.

Documents

[outline](#) an outline showing all sub-datasets and variables contained in this dataset

[dataset documentation](#)

[NCDC SST Documentation Page](#)

Datasets and variables

[Estimated sampling error variance](#) NOAA NCDC ERSST version2 err[Y X | T]

[Sea Surface Temperature](#) NOAA NCDC ERSST version2 SST[Y X | T]

Grids

Time grid: /T (months since 1960-01-01) ordered (Jan 1854) to (Jun 2006) by 1. N= 1830 pts :grid

Longitude grid: /X (degree_east) periodic (0) to (2W) by 2. N= 180 pts :grid

Latitude grid: /Y (degree_north) ordered (88S) to (88N) by 2. N= 89 pts :grid

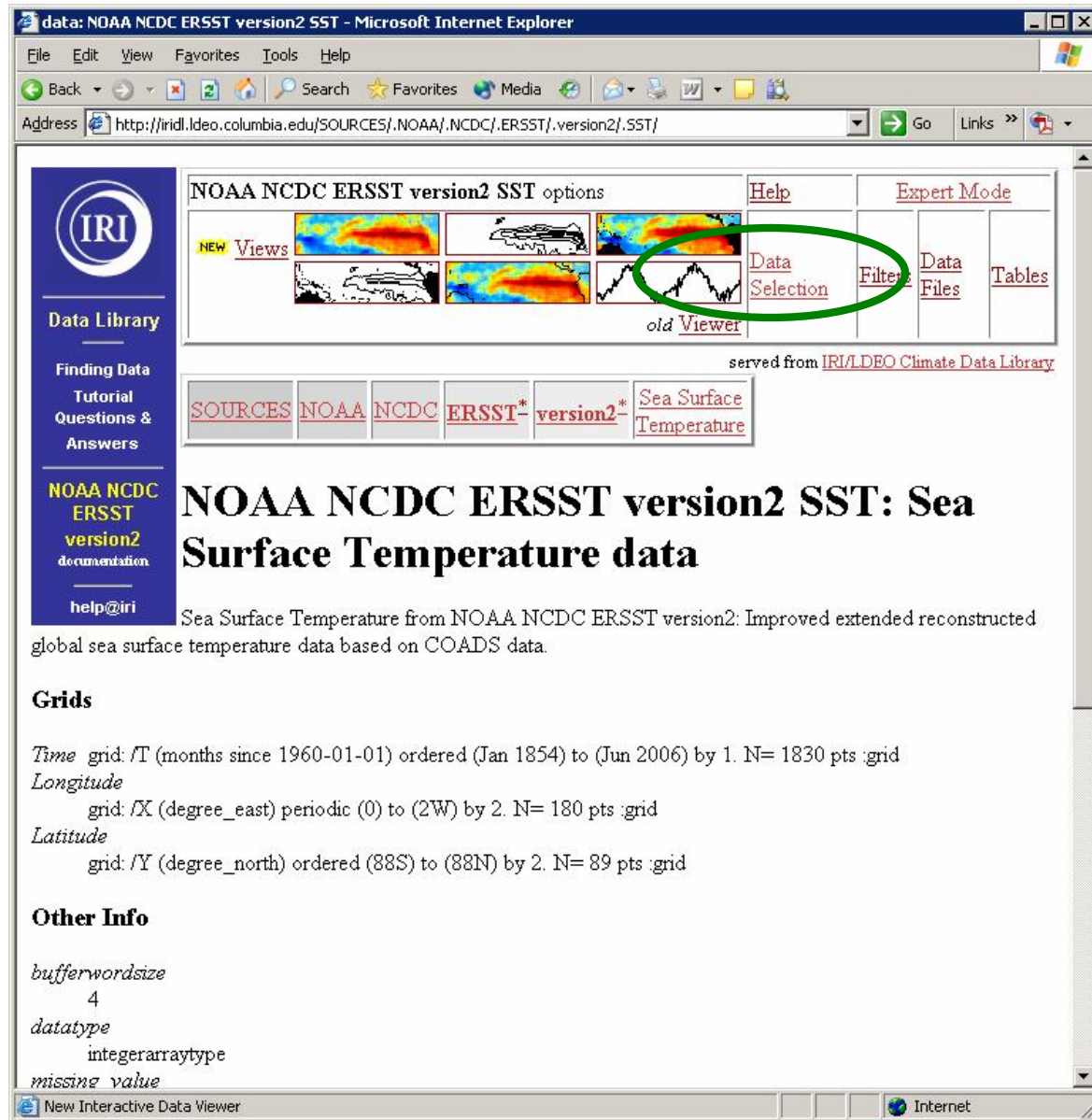
Estimated sampling error variance from NOAA NCDC ERSST version2: Improved extended reconstructed gl

Internet

Select the *Sea Surface Temperature* link.



Selecting a Time Period



The screenshot shows a Microsoft Internet Explorer browser window displaying the NOAA NCDC ERSST version2 SST options page. The address bar shows the URL: <http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCDC/.ERSST/.version2/.SST/>. The page features a navigation menu on the left with links for 'Data Library', 'Finding Data', 'Tutorial Questions & Answers', 'NOAA NCDC ERSST version2 documentation', and 'help@iri'. The main content area is titled 'NOAA NCDC ERSST version2 SST options' and includes a 'Help' link, 'Expert Mode', and a grid of data visualization options. A green circle highlights the 'Data Selection' link in the grid. Below the grid, there is a breadcrumb trail: 'SOURCES NOAA NCDC ERSST* version2* Sea Surface Temperature'. The main heading is 'NOAA NCDC ERSST version2 SST: Sea Surface Temperature data', followed by a description: 'Sea Surface Temperature from NOAA NCDC ERSST version2: Improved extended reconstructed global sea surface temperature data based on COADS data.' The page also includes sections for 'Grids' (Time, Longitude, Latitude) and 'Other Info' (bufferwordsize, datatype, missing value).

Select the *Data Selection* link.



Selecting a Time Period

NOAA NCEP ERSST version2 SST [Y X | T]

Data Selection

You can interactively pick out the data you would like with the [Data Viewer](#).

You can reduce the amount of data by restricting the range of the grids.

The current settings for the grids are

- grid: /Y (degree_north) ordered (88S) to (88N) by 2. N= 89 pts :grid
- grid: /X (degree_east) periodic (0) to (2W) by 2. N= 180 pts :grid
- grid: /T (months since 1960-01-01) ordered (Jan 1854) to (Jun 2006) by 1. N= 1830 pts :grid

If this is what you want, choose

Setting Ranges

If you want to restrict the range along a grid, choose here.

	name	range
Y	Latitude	88S to 88N
X	Longitude	0 to 2W
T	Time	Jan 1854 to Jun 2006

Hints

- longitude is best specified as west to east, two east values or two west values, otherwise you can end up with the wrong half of the world (e.g. 0.5E to 355.5E will work much better than 0.5E to 0.5W).
- order matters: reversing values will reverse the grid.
- when specifying time, some seasonal patterns work (i.e. Jan-Mar will select Jan-Mar of all years in the dataset).

access and manipulate the data

Enter *Jan 1950-2006* in the Time text box. Click *Restrict Ranges*.



Selecting a Time Period

NOAA NCDC ERSST version2 SST[Y X | T]

Data Selection

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- grid: /X (degree_east) periodic (0) to (2W) by 2. N= 180 pts :grid
- grid: /T (months since 1950-01-01) ordered (Jan 1950) to (Jan 2006) by 12. N= 57 pts :grid

If this is what you want, choose

Setting Ranges

If you want to restrict the range along a grid, choose here.

	name	range
Y	Latitude	88S to 88N
X	Longitude	0 to 2W
T	Time	Jan 1950-2006

Hints

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Click the *Stop Selecting* button.



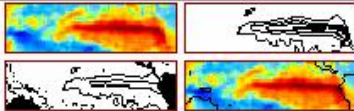
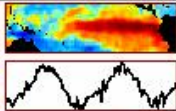

Downloading a Data File

data: NOAA NCDC ERSST version2 SST - Microsoft Internet Explorer

Address <http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCDC/.ERSST/.version2/.SST/T/%28Jan%201950-2006%>

NOAA NCDC ERSST version2 SST options

Help Expert Mode

NEW Views   
old Viewer

Data Selection Filters Data Files Tables

served from [IRI/LDEO Climate Data Library](#)

SOURCES	NOAA	NCDC	ERSST*	version2*	Sea Surface Temperature	T (Jan 1950-2006)
						VALUES

NOAA NCDC ERSST version2 SST: Sea Surface Temperature data

SST Sea Surface Temperature from NOAA NCDC ERSST version2: Improved extended reconstructed global sea surface temperature data based on COADS data.

Grids

Time grid: /T (months since 1960-01-01) ordered (Jan 1950) to (Jan 2006) by 12. N= 57 pts :grid
Longitude grid: /X (degree_east) periodic (0) to (2W) by 2. N= 180 pts :grid
Latitude grid: /Y (degree_north) ordered (88S) to (88N) by 2. N= 89 pts :grid

Click the *Data Files* link.



Downloading a Data File

NOAA NCDC ERSST version2 SST Data Files

This dataset has 3652560 bytes (3.4833527MB) of data in it, which should give you a rough idea of the size of any file that you ask for.

Download Data To Specific Software

iridl	The Postscript-based software on which the Data Library is built.
CPT	Climate Predictability Tool More information
ferret	Interactive computer visualization and analysis software. More information
GrADS	Grid Analysis and Display System More information
matlab	Data analysis and visualization software. More information
NCL	NCAR Command Language More information
WinDisp	A public domain software package for the display and analysis of satellite images, maps and associated databases, with an emphasis on early warning for food security. More information

Other Available File Formats

Full Information Formats
These files contain all of the available metadata.

OPeNDAP	A system which downloads data directly to software, such as matlab, Ferret, GrADS, etc. Specific instructions are available in the table above. Note: OPeNDAP was formally known as DODS (Distributed Oceanographic Data System). More Information
netCDF (network Common	

Click the *CPT* link.



Downloading a Data File

download for NOAA NCEP ERSST version2 SST - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address http://iridl.ldeo.columbia.edu/SOURCES/.NOAA/.NCEP/.ERSST/.version2/.SST/T/%28Jan%201950-2006% Go Links

IRI

Accessing data using CPT

You are downloading

NOAA NCEP ERSST version2 SST

with missing value: -9999

Longitude	grid: /X (degree_east) periodic (0) to (2W) by 2. N= 180 pts :grid
Latitude	grid: /Y (degree_north) ordered (88N) to (88S) by 2. N= 89 pts :grid
Time	grid: /T (months since 1960-01-01) ordered (Jan 1950) to (Jan 2006) by 12. N= 57 pts :grid

Get the data from this [2D tsv datafile](#).

or [2D tsv datafile \(gzip compressed\)](#).

Done Internet

Click one of the *tsv* links to download the data.



Accessing ECHAM4.5 Forecast Data

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Finding Data

[Datasets by Category](#)

[Datasets by Source](#)

[Dataset Search](#)

Help Resources

[Introductory Tutorial](#)

[Statistical Analysis Tutorial](#)

[Ingrid Function Documentation](#)

Click here to explore the data

Select the *Datasets by Category* link.



Accessing ECHAM4.5 Forecast Data

Datasets By Category

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IRI
Finding Datasets
By Category
By Source
By Search
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- [Cloud Characteristics and Radiation Budget](#) - Datasets focusing on parameters describing clouds and the radiation budget. Includes outgoing longwave radiation (OLR), albedo, and cloudiness parameters, among others.
- [Ecosystems](#) - Dataset focusing on fishing ecosystems and industry. Includes catch statistics and economic and environmental data variables, among others.
- [Forecasts](#) - Datasets focusing on climate forecast data. Includes IRI Seasonal Forecasts, among others.
- [Historical Model Simulations](#) - Datasets focusing on the recreation of historical data records by model simulations. Includes the NCEP-NCAR Reanalysis and ECHAM4.5, among others.
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- [Ice](#) - Datasets focusing on station data from the Arctic and chemical measurements from ice cores.

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Select the *Forecasts* link.



Accessing ECHAM4.5 Forecast Data

Forecast Data in the IRI Data Library

Dataset Name	Spatial Resolution (Lon/Lat) / Number of Stations	Spatial Extent	Time Period	Temporal Resolution
ENSOFORECAST	4x2	[124E,72W], [29S,29N]	Jan 1972, Feb 2001	MONTHLY
Description: Equatorial Pacific SSTA forecasts from the Lamont-Doherty Earth Observatory Climate Group.				
IRI FD ECHAM4.5 Forecast arst ensemble MONTHLY	2.8125x2.789328	GLOBAL	Aug 2001, Present	MONTHLY
Description: ECHAM4.5 ensemble forecasts based on Atlantic-blended forecast SST.				
IRI FD ECHAM4.5 Forecast psst ensemble12 MONTHLY	2.8125x2.789328	GLOBAL	Jan 1968, Jun 2003	MONTHLY
Description: Retrospective ECHAM4.5 ensemble forecasts based on persisted SST.				
IRI FD ECHAM4.5 Forecast psst ensemble24 MONTHLY	2.8125x2.789328	GLOBAL	Aug 2001, Present	MONTHLY
Description: Operational ECHAM4.5 ensemble forecasts based on persisted SST.				
IRI FD Seasonal Forecast Precipitation	2.5x2.5	GLOBAL	Oct-Dec 1997, Nov 2006 - Jan 2007	SEASONAL
Description: Seasonal Terile Forecasts for probability of normal, abnormal, and extreme precipitation and temperature.				
IRI FD Seasonal Forecast Temperature	2x2	GLOBAL	Jan-Mar 1998, Nov 2006 - Jan 2007	SEASONAL
Description: Seasonal Terile Forecasts for probability of normal,				

Select the *IRI FD ECHAM4.5 Forecast psst ensemble12 MONTHLY* link.



Accessing ECHAM4.5 Forecast Data

dataset: IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY - Microsoft Internet Explorer

Address <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/>

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY options

Help Expert Mode

Data Selection Data Downloads & Files Data Tables

served from IRI/LDEO Climate Data Library

SOURCES IRI Forecast Division ECHAM4.5 Forecast psst ensemble12 MONTHLY

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY

MONTHLY from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST.

Documents

[outline](#) an outline showing all sub-datasets and variables contained in this dataset

[griblist](#)

Datasets and variables

[above ground](#) IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY above_ground[t2m]

[Pressure Level: Smoothed and Pillea](#) IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY PressureLevel-SF[huss omega ta phi va ua]

[surface](#) IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface[zg hfss prc prl net hfls slp tauy prcp tclld evs stemp taux]

[Forecast Time](#) IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY FT[L S]

[top](#) IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY top[net]

Grids

Select the *surface* link.



Accessing ECHAM4.5 Forecast Data

dataset: IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface - Microsoft Internet Explorer

Address: <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surface/>

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IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface options

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IRI Forecast Division ECHAM4.5 Forecast psst ensemble12 MONTHLY surface

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface

MONTHLY surface from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST.

Documents

[outline](#) an outline showing all sub-datasets and variables contained in this dataset

Datasets and variables

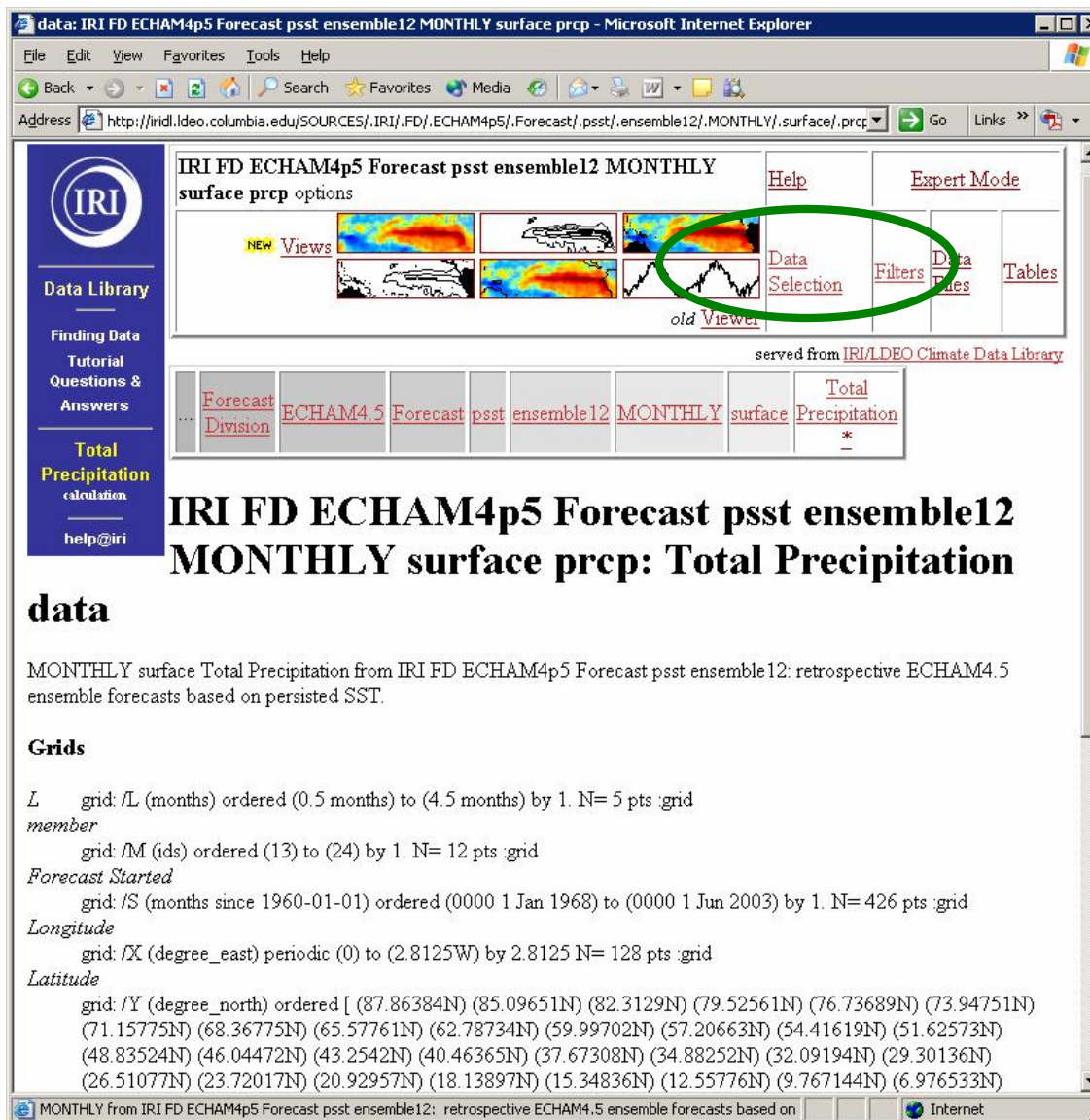
evaporation	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface evs[X Y M L S]
surface latent heat flux	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface hfls[X Y M L S]
surface sensible heat flux	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface hfss[X Y M L S]
net	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface net[hwflx swflx]
convective precipitation	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prc[X Y M L S]
Total Precipitation	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp[X Y M L S]
large scale precipitation	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface pri[X Y M L S]
sea level pressure	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface slp[X Y M L S]
surface Temperature	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface stemp[X Y M L S]
surface zonal wind stress	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface tauzx[X Y M L S]
surface meridional wind stress	IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface tauyz[X Y M L S]

MONTHLY surface evaporation from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble

Select the *Total Precipitation* link.



Selecting a Data Domain



The screenshot shows a web browser window with the address <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surface/.prcp/>. The page title is "IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp options". A green circle highlights the "Data Selection" link in the navigation menu. Below the navigation menu, there is a table with the following content:

Forecast Division	ECHAM4.5	Forecast psst ensemble12	MONTHLY	surface	Total Precipitation
					*
					-

The main content area displays the title "IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp: Total Precipitation data" and a description: "MONTHLY surface Total Precipitation from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST." Below this, there is a "Grids" section with the following information:

Grids

- L* grid: /L (months) ordered (0.5 months) to (4.5 months) by 1. N= 5 pts :grid member
- grid: /M (ids) ordered (13) to (24) by 1. N= 12 pts :grid
- Forecast Started*
- grid: /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jun 2003) by 1. N= 426 pts :grid
- Longitude*
- grid: /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
- Latitude*
- grid: /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) (79.52561N) (76.73689N) (73.94751N) (71.15775N) (68.36775N) (65.57761N) (62.78734N) (59.99702N) (57.20663N) (54.41619N) (51.62573N) (48.83524N) (46.04472N) (43.2542N) (40.46365N) (37.67308N) (34.88252N) (32.09194N) (29.30136N) (26.51077N) (23.72017N) (20.92957N) (18.13897N) (15.34836N) (12.55776N) (9.767144N) (6.976533N)

Select the *Data Selection* link.



Selecting a Data Domain

IRI FD ECHAM4p5 Forecast pssr ensemble12 MONTHLY surface prcp data selection - Microsoft Internet Explorer

Address: <http://irdl.ideo.columbia.edu/SOURCES/IRI/FD/ECHAM4p5/Forecast/pssr/ensemble12/MONTHLY/surface/prcp/>

Data Selection

You can interactively pick out the data you would like with the [Data Viewer](#).

You can reduce the amount of data by restricting the range of the grids.

The current settings for the grids are

- grid /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
- grid /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) ... (87.86384S)] N= 64 pts :grid
- grid /M (ids) ordered (13) to (24) by 1. N= 12 pts :grid
- grid /L (months) ordered (0.5 months) to (4.5 months) by 1. N= 5 pts :grid
- grid /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jun 2003) by 1. N= 425 pts :grid

If this is what you want, choose

Setting Ranges

If you want to restrict the range along a grid, choose here.

	name	range
X	Longitude	0 to 2.8125W
Y	Latitude	87.86384N to 87.86384S
M	member	13 to 24
L	L	0.5 to 4.5
S	Forecast Started	0000 1 Jan 1968 to 0000 1 Jun 2003

Enter *1 Jan 1968-2003* in the S text box and *1.5 to 3.5* in the L text box. Click *Restrict Ranges*.



Selecting a Data Domain

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp [X Y | M L S]

Data Selection

You can interactively pick out the data you would like with the [Data Viewer](#).

You can reduce the amount of data by restricting the range of the grids.

The current settings for the grids are

- grid: /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
- grid: /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) ... (87.86384S)] N= 64 pts :grid
- grid: /M (ids) ordered (13) to (24) by 1. N= 12 pts :grid
- grid: /L (months) ordered (1.5 months) to (3.5 months) by 1. N= 3 pts :grid
- grid: /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jan 2003) by 12. N= 36 pts :grid

If this is what you want, choose **Stop Selecting**

Setting Ranges

If you want to restrict the range along a grid, choose here.

	name	range
X	Longitude	0 to 2.8125W
Y	Latitude	87.86384N to 87.86384S
M	member	13 to 24
L	L	1.5 to 3.5
S	Forecast Started	1 Jan 1968-2003

Restrict Ranges

Click the *Stop Selecting* button.



Creating an Ensemble Average

data: IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp - Microsoft Internet Explorer

Address: <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surface/.prcp/>

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp options

NEW Views [Data Selection](#) [Filters](#) [Data Files](#) [Tables](#)

old Viewer

served from [IRI/LDEO Climate Data Library](#)

...	Forecast	psst	ensemble12	MONTHLY	surface	Total Precipitation	L (1.5) (3.5)	S (1 Jan 1968-2003)
						*	RANGEEDGES	VALUES

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp: Total Precipitation data

MONTHLY surface prcp prcp Total Precipitation from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST.

Grids

L grid: /L (months) ordered (1.5 months) to (3.5 months) by 1. N= 3 pts :grid
member
 grid: /M (jds) ordered (13) to (24) by 1. N= 12 pts :grid
Forecast Started
 grid: /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jan 2003) by 12. N= 36 pts :grid
Longitude
 grid: /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
Latitude
 grid: /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) (79.52561N) (76.73689N) (73.94751N) (71.15775N) (68.36775N) (65.57761N) (62.78734N) (59.99702N) (57.20663N) (54.41619N) (51.62573N) (48.83524N) (46.04472N) (43.2542N) (40.46365N) (37.67308N) (34.88252N) (32.09194N) (29.30136N) (26.51077N) (23.72017N) (20.92957N) (18.13897N) (15.34836N) (12.55776N) (9.767144N) (6.976533N)

Select the *Filters* link.



Creating an Ensemble Average

IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp filters - Microsoft Internet Explorer

Address: <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.sui>

Filters

Here are some filters that are useful for manipulating data. There are actually many more available, but they have to be entered manually. See [General Ingrid Help](#) for more information.

[Monthly Climatology](#) calculates a monthly climatology by averaging over all years.

[anomalies](#) calculates the difference between the (above) monthly climatology and the original data.

Integrate along [X Y M L S](#)

Differentiate along [X Y M L S](#)

Take differences along [X Y M L S](#)

Average over [X Y M L S](#) [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

RMS (root mean square with mean *not* removed) over [X Y M L S](#) | [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

RMSA (root mean square with mean removed) over [X Y M L S](#) | [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

Maximum over [X Y M L S](#) | [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

Minimum over [X Y M L S](#) | [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

Detrend (best-fit-line) over [X Y M L S](#) | [X Y X M X L X S Y M Y L Y S M L M S L S](#) | [X Y M X Y L X Y S X M L X M S X L S Y M L Y M S Y L S M L S](#) | [X Y M L X Y M S X Y L S X M L S Y M L S](#) | [X Y M L S](#) |

Convert units from **m/s** to

[Note on units](#)

Select the Average over *M* link.



Creating an Seasonal Average

data: mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] - Microsoft Internet Explorer

Address: <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surfa>

mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] options

[Help](#) [Expert Mode](#)

[Data Selection](#) [Filters](#) [Data Files](#) [Tables](#)

served from IRI/LDEO Climate Data Library

psst	ensemble12	MONTHLY	surface	Total Precipitation	L (1.5) (3.5)	S (0000)	1 Jan	[M]
				*	RANGEEDGES		1968-	0.0
				-		VALUES	2003	average

mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp]: Total Precipitation data

MONTHLY surface prcp prcp prcp Total Precipitation from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST.

Grids

L grid: /L (months) ordered (1.5 months) to (3.5 months) by 1. N= 3 pts :grid
Forecast Started
grid: /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jan 2003) by 12. N= 36 pts :grid
Longitude
grid: /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
Latitude
grid: /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) (79.52561N) (76.73689N) (73.94751N) (71.15775N) (68.36775N) (65.57761N) (62.78734N) (59.99702N) (57.20663N) (54.41619N) (51.62573N) (48.83524N) (46.04472N) (43.2542N) (40.46365N) (37.67308N) (34.88252N) (32.09194N) (29.30136N) (26.51077N) (23.72017N) (20.92957N) (18.13897N) (15.34836N) (12.55776N) (9.767144N) (6.976533N) (4.18592N) (1.395307N) (1.395307S) (4.18592S) (6.976533S) (9.767144S) (12.55776S)

Select the *Filters* link.



Creating an Seasonal Average

mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] filters - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surfa> Go Links

Filters

Here are some filters that are useful for manipulating data. There are actually many more available, but they have to be entered manually. See [General Ingrid Help](#) for more information.

IRI

Data Library

Finding Data

Tutorial

Questions & Answers

mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] dataset help@iri

[Monthly Climatology](#) calculates a monthly climatology by averaging over all years.

[anomalies](#) calculates the difference between the (above) monthly climatology and the original data.

Integrate along [XYLS](#)

Differentiate along [XYLS](#)

Take differences along [XYLS](#)

Average over [XYLS](#) | [XYXLXSYLYLS](#) | [XYLXYSXLSYLS](#) | [XYLS](#) |

RMS (root mean square with mean *not* removed) over [XYLS](#) | [XYXLXSYLYLS](#) | [XYL](#) |

RMSA (root mean square with mean removed) over [XYLS](#) | [XYXLXSYLYLS](#) | [XYLXY](#) |

Maximum over [XYLS](#) | [XYXLXSYLYLS](#) | [XYLXYSXLSYLS](#) | [XYLS](#) |

Minimum over [XYLS](#) | [XYXLXSYLYLS](#) | [XYLXYSXLSYLS](#) | [XYLS](#) |

Detrend (best-fit-line) over [XYLS](#) | [XYXLXSYLYLS](#) | [XYLXYSXLSYLS](#) | [XYL](#) |

Convert units from m/s to Convert

[Note on units](#)

Select the Average over L link.



Downloading a Data File

The screenshot shows a web browser window displaying the IRI website. The page title is "mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] - Microsoft Internet Explorer". The address bar shows the URL: "http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/./psst/./ensemble12/.MONTHLY/./surfa". The page content includes a navigation menu on the left with "Data Library", "Finding Data", "Tutorial Questions & Answers", and "help@iri". The main content area has a header "mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] options" and a "NEW Views" section with several thumbnail images. A "Filters" link is circled in green. Below this, there is a table with the following content:

		Total		S (0000			
ensemble12	MONTHLY	surface	Precipitation	L (1.5) (3.5)	1 Jan	[M]	[L]
			*	RANGEEDGES	1968-	0.0	0.0
			-		2003)	average	average
				VALUES			

Below the table, the text reads: "mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] : Total Precipitation data". This is followed by a description: "MONTHLY surface prcp prcp prcp prcp Total Precipitation from IRI FD ECHAM4p5 Forecast psst ensemble12: retrospective ECHAM4.5 ensemble forecasts based on persisted SST." and a "Grids" section with details on forecast start, longitude, and latitude.

Select the *Data Files* link.



Downloading a Data File

mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] data files - Microsoft Internet Explorer

Address <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surf/>

mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] Data Files

This dataset has 2359296 bytes (2.25MB) of data in it, which should give you a rough idea of the size of any file that you ask for.

Download Data To Specific Software

ingrid	The Postscript-based software on which the Data Library is built.
CPT	Climate Predictability Tool More information
Ferret	Interactive computer visualization and analysis software. More information
GrADS	Grid Analysis and Display System More information
matlab	Data analysis and visualization software. More information
NCL	NCAR Command Language More information
WinDisp	A public domain software package for the display and analysis of satellite images, maps and associated databases, with an emphasis on early warning for food security. More information

Other Available File Formats

Full Information Formats

These files contain all of the available metadata.

OPeNDAP	A system which downloads data directly to software, such as matlab, Ferret, GrADS, etc. Specific instructions are available in the table above. Note: OPeNDAP was formally known as DODS (Distributed Oceanographic Data System). More Information
netCDF (network Common Data Form)	A commonly supported self-describing data format. More Information

Select the *CPT* link.



Downloading a Data File

download for mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp] - Microsoft Internet Explo...

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address <http://iridl.ldeo.columbia.edu/SOURCES/.IRI/.FD/.ECHAM4p5/.Forecast/.psst/.ensemble12/.MONTHLY/.surf...> Go Links

IRI

Accessing data using CPT

You are downloading

mean mean [IRI FD ECHAM4p5 Forecast psst ensemble12 MONTHLY surface prcp]

Longitude	grid: /X (degree_east) periodic (0) to (2.8125W) by 2.8125 N= 128 pts :grid
Latitude	grid: /Y (degree_north) ordered [(87.86384N) (85.09651N) (82.3129N) (79.52561N) (76.73689N) (73.94751N) (71.15775N) (68.36775N) (65.57761N) (62.78734N) (59.99702N) (57.20663N) (54.41619N) (51.62573N) (48.83524N) (46.04472N) (43.2542N) (40.46365N) (37.67308N) (34.88252N) (32.09194N) (29.30136N) (26.51077N) (23.72017N) (20.92957N) (18.13897N) (15.34836N) (12.55776N) (9.767144N) (6.976533N) (4.18592N) (1.395307N) (1.395307S) (4.18592S) (6.976533S) (9.767144S) (12.55776S) (15.34836S) (18.13897S) (20.92957S) (23.72017S) (26.51077S) (29.30136S) (32.09194S) (34.88252S) (37.67308S) (40.46365S) (43.2542S) (46.04472S) (48.83524S) (51.62573S) (54.41619S) (57.20663S) (59.99702S) (62.78734S) (65.57761S) (68.36775S) (71.15775S) (73.94751S) (76.73689S) (79.52561S) (82.3129S) (85.09651S) (87.86384S)] :grid
Forecast Started	grid: /S (months since 1960-01-01) ordered (0000 1 Jan 1968) to (0000 1 Jan 2003) by 12. N= 36 pts :grid

Get the data from this [2D tsv datafile](#).

or [2D tsv datafile \(gzip compressed\)](#).

access and manipulate the data Internet

Click one of the *tsv* links to download the data.



Additional Information

IRI Data Library

- Introductory Tutorial
 - <http://iridl.ldeo.columbia.edu/dochelp/Tutorial/>
- Statistical Analysis Tutorial
 - <http://iridl.ldeo.columbia.edu/dochelp/StatTutorial/>
- Email Questions
 - help@iri.columbia.edu

Climate Predictability Tool

- Information and Software Download
 - <http://iri.columbia.edu/outreach/software/>

