

An Overview of NCDC, NCAR and Other Sources of Weather Products.

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AMS Short Course: The Art and Science of Forensic Meteorology

7 January 2018



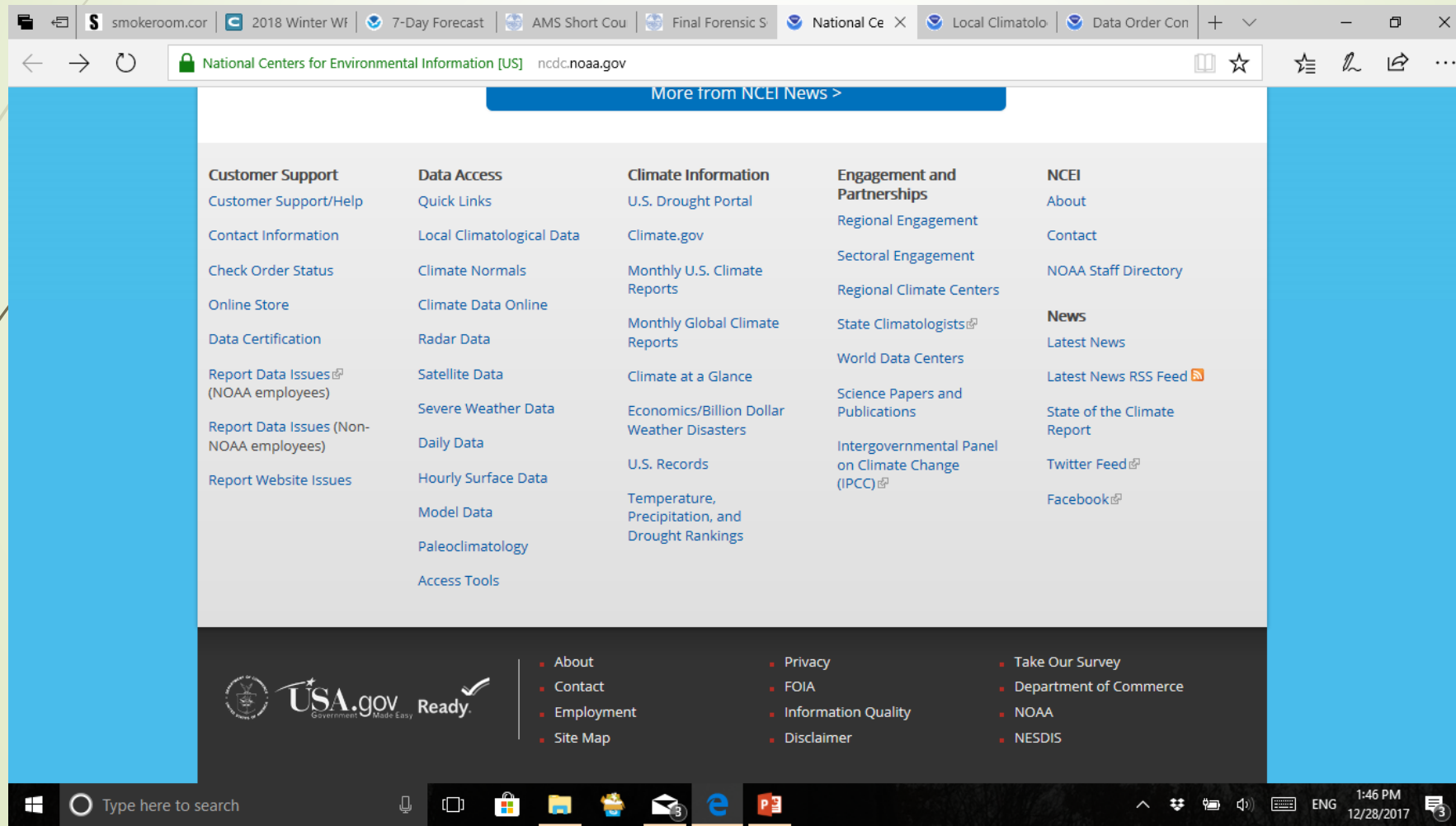
National Climatic Data Center



- For the majority of the reports I've prepared, station data is needed for a particular day, or set of days.
- This information is available from the National Weather Service (<http://weather.gov>)
- Click on the CWA for the area you are interested in and you can retrieve the Daily Climate Report (CLI) or Monthly Climate Report (CF-6). However, these data are available for 60 days or five years, respectively. Also, you may need to 'certify' the data.

National Climatic Data Center

- The main website (<https://www.ncdc.noaa.gov/>)



The screenshot shows the National Climatic Data Center (NCDC) website in a web browser. The browser's address bar displays the URL <https://www.ncdc.noaa.gov/>. The website features a blue header with the text "National Centers for Environmental Information [US]" and "ncdc.noaa.gov". Below the header, there is a navigation menu with five main categories: Customer Support, Data Access, Climate Information, Engagement and Partnerships, and NCEI. Each category has several sub-links. At the bottom of the page, there is a footer with logos for USA.gov and Ready.gov, and a list of links including About, Contact, Employment, Site Map, Privacy, FOIA, Information Quality, Disclaimer, Take Our Survey, Department of Commerce, NOAA, and NESDIS. The Windows taskbar is visible at the bottom of the screen, showing the time as 1:46 PM on 12/28/2017.

More from NCEI News >

Customer Support	Data Access	Climate Information	Engagement and Partnerships	NCEI
Customer Support/Help	Quick Links	U.S. Drought Portal	Regional Engagement	About
Contact Information	Local Climatological Data	Climate.gov	Sectoral Engagement	Contact
Check Order Status	Climate Normals	Monthly U.S. Climate Reports	Regional Climate Centers	NOAA Staff Directory
Online Store	Climate Data Online	Monthly Global Climate Reports	State Climatologists	News
Data Certification	Radar Data	Climate at a Glance	World Data Centers	Latest News
Report Data Issues (NOAA employees)	Satellite Data	Economics/Billion Dollar Weather Disasters	Science Papers and Publications	Latest News RSS Feed
Report Data Issues (Non-NOAA employees)	Severe Weather Data	U.S. Records	Intergovernmental Panel on Climate Change (IPCC)	State of the Climate Report
Report Website Issues	Daily Data	Temperature, Precipitation, and Drought Rankings		Twitter Feed
	Hourly Surface Data			Facebook
	Model Data			
	Paleoclimatology			
	Access Tools			

USA.gov Ready.gov

- About
- Contact
- Employment
- Site Map
- Privacy
- FOIA
- Information Quality
- Disclaimer
- Take Our Survey
- Department of Commerce
- NOAA
- NESDIS



National Climatic Data Center

- Let's click on 'climate data online', then 'browse data' and finally 'Local Climatological Data'. Then use the search tool:
- <https://www.ncdc.noaa.gov/cdo-web/datatools/lcd>

National Climatic Data Center

➤ Then you can select your station:

The screenshot shows a web browser window with multiple tabs. The active tab is 'Local Climatc'. The address bar shows the URL 'ncdc.noaa.gov/cdo-web/datatools/lcd'. The website has a dark blue header with navigation links: Home, Climate Information, Data Access, Customer Support, Contact, and About. A search bar is located on the right side of the header. Below the header, a breadcrumb trail reads 'Home > Climate Data Online > Data Tools > Local Climatological Data (LCD)'. A secondary navigation bar contains links for Datasets, Search Tool, Mapping Tool, Data Tools, and Help. A shopping cart icon in the top right corner indicates 'Cart (Free Data) 1 item'. The main content area is titled 'Data Tools: Local Climatological Data (LCD)' and includes a paragraph explaining that LCD data is only available for stations within the United States and its territories. Below this text, the heading 'Map Tool' is displayed in blue. At the bottom, a section titled 'Select a Location Type' contains a dropdown menu with the following options: Country, US Territory, State, County, and Zip Code.

Home Climate Information Data Access Customer Support Contact About Search

Home > Climate Data Online > Data Tools > Local Climatological Data (LCD) Datasets Search Tool Mapping Tool Data Tools Help

Cart (Free Data) 1 item

Data Tools: Local Climatological Data (LCD)

Local Climatological Data (LCD) is only available for stations and locations within the United States and its territories. Select the state or territory, location, and time to view specific data. Click the station name to view details or click "ADD TO CART" to order that station's data.

Map Tool

Select a Location Type

- Country
- US Territory
- State
- County
- Zip Code

National Climatic Data Center

► Let's choose Columbia, MO:

← → ↻ National Centers for Environmental Information [US] ncdc.noaa.gov/cdo-web/datasets/LCD/stations/WBAN:03945/detail ☆ ☆ ☆ ☆ ☆

Home Climate Information Data Access Customer Support Contact About Search

Home > Climate Data Online > Station Details Datasets Search Tool Mapping Tool Data Tools Help

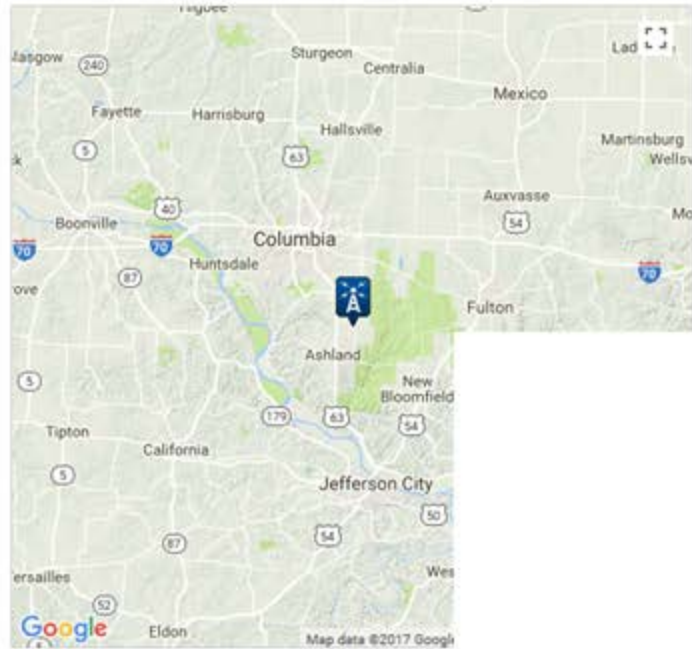
Cart (Free Data) 0 items

Local Climatological Data Station Details

STATION DETAILS	
Name	COLUMBIA REGIONAL AIRPORT, MO US
Network ID	WBAN:03945
Latitude/Longitude	38.8169°, -92.2183°
Elevation	272.2 m

PERIOD OF RECORD	
Start Date ¹	1969-11-01
End Date ¹	2017-12-26
Data Coverage ²	100%

ADD TO CART



The map shows the Columbia, Missouri area with major highways (I-70, I-55, I-49, I-24) and surrounding cities like Sturgeon, Centralia, Mexico, Fayette, Harrisburg, Hallsville, Martinsburg, Wellsburg, Auxvasse, Fulton, Ashland, New Bloomfield, Jefferson City, Tipton, California, Versailles, and Eldon. The Columbia Regional Airport is marked with a blue pin icon near the center of the map.

National Climatic Data Center

- ➡ This information is now free, don't be fooled by "add to cart". Now let's choose: 1 February 2007:

The screenshot shows a web browser window with the URL ncdc.noaa.gov/cdo-web/datasets/LCD/stations/WBAN:03945/detail. The page title is "Station Data Inventory, Access & History".

Left Sidebar:

- Data & Inventory**
 - [View Data](#)
- General History**
 - [1968 to Present](#)
- Location History**
 - [1968 to Present](#)
- Equipment History**
 - [1968 to Present](#)
- Documentation**
 - [Documents](#)

Main Content Area:

View Station Data

View current station data by selecting the desired options below and clicking the "View Data" button.

2007
February
01

VIEW DATA

View Station Data Help

View Station Data is a web based interface which allows easy access to NCDC's station databases. Data coverage is stored based on observations over a specific period of time whether annually, monthly, or daily. The date range changes based on the selected dataset.

Select the date range to choose a time period. Then click on the "VIEW DATA" button. If you find that you need more guidance, contact our customer support team.

National Climatic Data Center

- ▶ You are given the monthly information (note you can certify the data).

National Climatic Data Center

and the data from 1 February 2007

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 893 ft. Lat: 38.8169° N Lon: -92.2183° W
Station: COLUMBIA REGIONAL AIRPORT, MO US 03945

Local Climatological Data
Hourly Observations
February 2007
Generated on 12/28/2017

151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visi- bility	Weather Type (see documentation)	Dry Bulb Temp	Wet Bulb Temp	Dew Point Temp	Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3- Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Alti- meter Setting (inHg)
1	2	3	4	5	AU AW MW	(F) (C)	(F) (C)	(F) (C)											
01	0054	7	OVC:08 17	10.00		21 -6.1	20 -6.6	18 -7.8	88	8	200		28.94			29.93	FM-15	0.00	29.90
01	0138	7	FEW:02 9 OVC:08 15	10.00		21 -6.0	20 -6.6	18 -8.0	86	8	200		28.93				FM-16		29.89
01	0152	6	OVC:08 13	10.00		21 -6.0	20 -6.6	18 -8.0	86	8	190		28.93				FM-16		29.89
01	0154	7	OVC:08 13	10.00		22 -5.6	21 -6.2	18 -7.8	85	8	200		28.93			29.92	FM-15	0.00	29.89
01	0229	7	OVC:08 7	10.00		21 -6.0	20 -6.5	19 -7.0	93	8	210		28.92				FM-16		29.88
01	0254	7	OVC:08 7	10.00		22 -5.6	21 -6.1	19 -7.2	89	7	230		28.91	6	+0.05	29.90	FM-15	0.00	29.87
01	0300	4		9.94		22 -5.6	21 -6.1	19 -7.2	89	7	230		28.92	6	+0.05	29.90	FM-12		
01	0354	7	OVC:08 7	8.00		22 -5.6	21 -6.1	19 -7.2	89	5	220		28.89			29.88	FM-15	0.00	29.85
01	0454	7	OVC:08 7	7.00		22 -5.6	21 -6.1	19 -7.2	89	6	240		28.88			29.88	FM-15	0.00	29.84
01	0554	7	OVC:08 7	7.00		22 -5.6	21 -6.1	19 -7.2	89	6	250		28.89	5	+0.02	29.88	FM-15	0.00	29.85
01	0600	4		6.84		22 -5.6	21 -6.1	19 -7.2	89	6	250		28.90	5	+0.02	29.88	FM-12		
01	0654	7	OVC:08 9	6.00	BR	23 -5.0	22 -5.5	20 -6.7	88	5	270		28.86			29.85	FM-15	0.00	29.82
01	0725	7	SCT:04 9 BKN:07 18 OVC:08 35	5.00	BR	21 -6.0	20 -6.5	19 -7.0	93	5	250		28.87				FM-16		29.83
01	0754	7	SCT:04 9 BKN:07 15 OVC:08 21	5.00	BR	23 -5.0	22 -5.5	20 -6.7	88	6	210		28.89			29.88	FM-15	0.00	29.85
01	0807	7	BKN:07 9 BKN:07 15 OVC:08 21	5.00	BR	23 -5.0	22 -5.7	19 -7.0	86	6	240		28.89				FM-16		29.85
01	0854	7	OVC:08 7	8.00	BR	24 -4.4	23 -5.2	20 -6.7	84	7	270		28.90	3	-0.01	29.89	FM-15	0.00	29.86
01	0900	4		5.69		24 -4.4	23 -5.2	20 -6.7	84	7	270		28.91	3	-0.01	29.89	FM-12		
01	0954	7	OVC:08 9	10.00		25 -3.9	23 -4.8	20 -6.7	81	6	250		28.90			29.89	FM-15	0.00	29.86
01	1017	7	BKN:07 11	10.00		25 -4.0	23 -5.0	19 -7.0	80	6	230		28.90				FM-16		29.86
01	1049	7	BKN:07 15	10.00		27 -3.0	24 -4.2	19 -7.0	74	7	200		28.90				FM-16		29.86
01	1054	7	BKN:07 15 BKN:07 22	10.00		27 -2.8	25 -3.9	21 -6.1	78	6	210		28.90			29.89	FM-15	0.00	29.86
01	1154	7	OVC:08 18	10.00		28 -2.2	25 -3.7	20 -6.7	72	8	290		28.88	8	+0.02	29.87	FM-15	0.00	29.84
01	1200	4		9.94		28 -2.2	25 -3.7	20 -6.7	72	8	290		28.89	8	+0.02	29.87	FM-12		
		7	BKN:07 20 OVC:08 26	10.00		29 -1.7	26 -3.4	20 -6.7	69	9	280		28.85			29.84	FM-15	0.00	29.81
		7	SCT:04 24	10.00		30 -1.0	26 -3.2	19 -7.0	64	9	290		28.84				FM-16		29.80
		7	SCT:04 24	10.00		29 -1.7	26 -3.4	20 -6.7	69	9	280		28.82			29.81	FM-15	0.00	29.78
		6	BKN:07 24	10.00		30 -1.0	26 -3.2	19 -7.0	64	9	300		28.82				FM-16		29.78
01	1454	7	BKN:07 24	10.00		29 -1.7	26 -3.4	20 -6.7	69	8	290		28.82	6	+0.06	29.80	FM-15	0.00	29.78
01	1500	4		9.94		29 -1.7	26 -3.4	20 -6.7	69	8	290		28.83	6	+0.06	29.80	FM-12		
01	1552	6	SCT:04 25 BKN:07 30	10.00		27 -3.0	24 -4.2	19 -7.0	74	13	300		28.82				FM-16		29.78
01	1554	7	SCT:04 25 BKN:07 30	10.00		27 -2.8	24 -4.2	19 -7.2	72	13	290		28.82			29.80	FM-15	0.00	29.78
01	1801	7	SCT:04 25 BKN:07 28	10.00		27 -3.0	24 -4.4	18 -8.0	69	11	300		28.82				FM-16		29.78
01	1854	7	OVC:08 25	10.00		26 -2.2	23 -4.8	18 -7.8	71	9	280		28.83			29.81	FM-15	0.00	29.79

CERTIFY THIS DATA


2:04 PM



National Climatic Data Center

➤ To certify the data:

1. Click on the certification button, you will receive e-mail that your order is processed.
2. You will receive a second e-mail stating your order is ready. In the e-mail, click on 'start certification process'
3. You will be taken to a website to process your order. Certification still requires funds (\$8.00 for the order \$116 for certification).



University Corporation for Atmospheric Research

- Occasionally, I've needed RADAR images or satellite photos. A good place to retrieve this information (available since 1 January 1996) is from:
- <http://www2.mmm.ucar.edu/imagearchive/>


University Corporation for Atmospheric Research

➡ Looks like this:

The screenshot shows a web browser window with the address bar displaying `www2.mmm.ucar.edu/imagearchive`. The browser's tab bar includes several open tabs: "smokeroom.com", "2018 Winter WRF Tutor", "National Weather Servi", "AMS Short Course: The", "Final Forensic SC Progr", and "Image Archive". The website's header features a purple "Episodes Home" button and the title "Image Archive Meteorological case study selection kit". On the left side, there is a date selection interface with dropdown menus for "Dec" and "27", a "2017" year selector, and a "Go!" button. Below this is a link labeled "latest". The main content area, titled "NEWS --", contains a list of updates with dates and descriptions of server issues, archiving changes, and data availability. The updates include:

- 20170804 - Remade Jan 2017 web pages. Some radar composite regions were missing.
- 20170111 - Stopped archiving SPC storm reports. Some reports are added after the scheduled download time of the image. Therefore the version here is often incomplete. Use [SPC](#) directly instead.
- 20161201-20161208 - crontab not copied to new server. During this interval, no images were archived.
- 20141205 - Server issue fixed; no images lost.
- 20141205 - Images stopped loading around midnight. Sys admin has been alerted. Images are still being archived but they are not accessible from the server.
- 20140115 - While switching to new server, images were not downloaded between 10am and 4pm MST.
- 20131231 - Dates in November and most of December 2013 were incomplete or missing for a few days. Fixed now.
- 20131122 - Server misconfigured and site was down for a couple days. Fixed now.
- 20121101 - Increased frequency of surface analyses from every 2 hours to every hour.
- 20120926 - Slightly different daily precip. No more "lowres" images.
- 20120926 - Back to normal. Please email me if you notice any problems.
- 20120921 - Web server went down for a few days. Server is back up, but images aren't showing up.
- 20110926 - Image archive working again after hard disk failed. A back-up was started but a few hours will always be missing for the morning of 20110923. Aug and Sep 2011 web pages were erased temporarily, but they should be restored in a couple days.
- 20110914 - Regional radar composites are missing 20081220-20090111. Filled in national composite with NCDC web archives.
- 20110624 - Deleted my crontab that downloads radar composites and had to recreate it by hand. It must have happened around June 12. I found an error in it and fixed it. It should continue grabbing images every hour now instead of once a day, as it was incorrectly set up to do. Sorry for the inconvenience it caused you!
- 20110406 - Managed to fill in some missing radar composites from 20100928-20110402, but they have no state borders.
- 20110404 - Radar composites are missing from 20110326 to 20110402 due to a URL change at the originating web site.
- 20110107 - Radar composites are missing from 20110103 to 20110107 due to a URL change at the originating web site.
- 20101107 - Radar composites should be working now. Some from Sep 2010 may still be the wrong region. I attempted to fix them where possible.
- 20100928 - The north plains, east plains, and south plains radar composites are still not coming in right. GoD is working on their website.

The browser's taskbar at the bottom shows the Windows Start button, a search bar, and several application icons. The system clock indicates the time is 2:17 PM on a day with the language set to ENG.

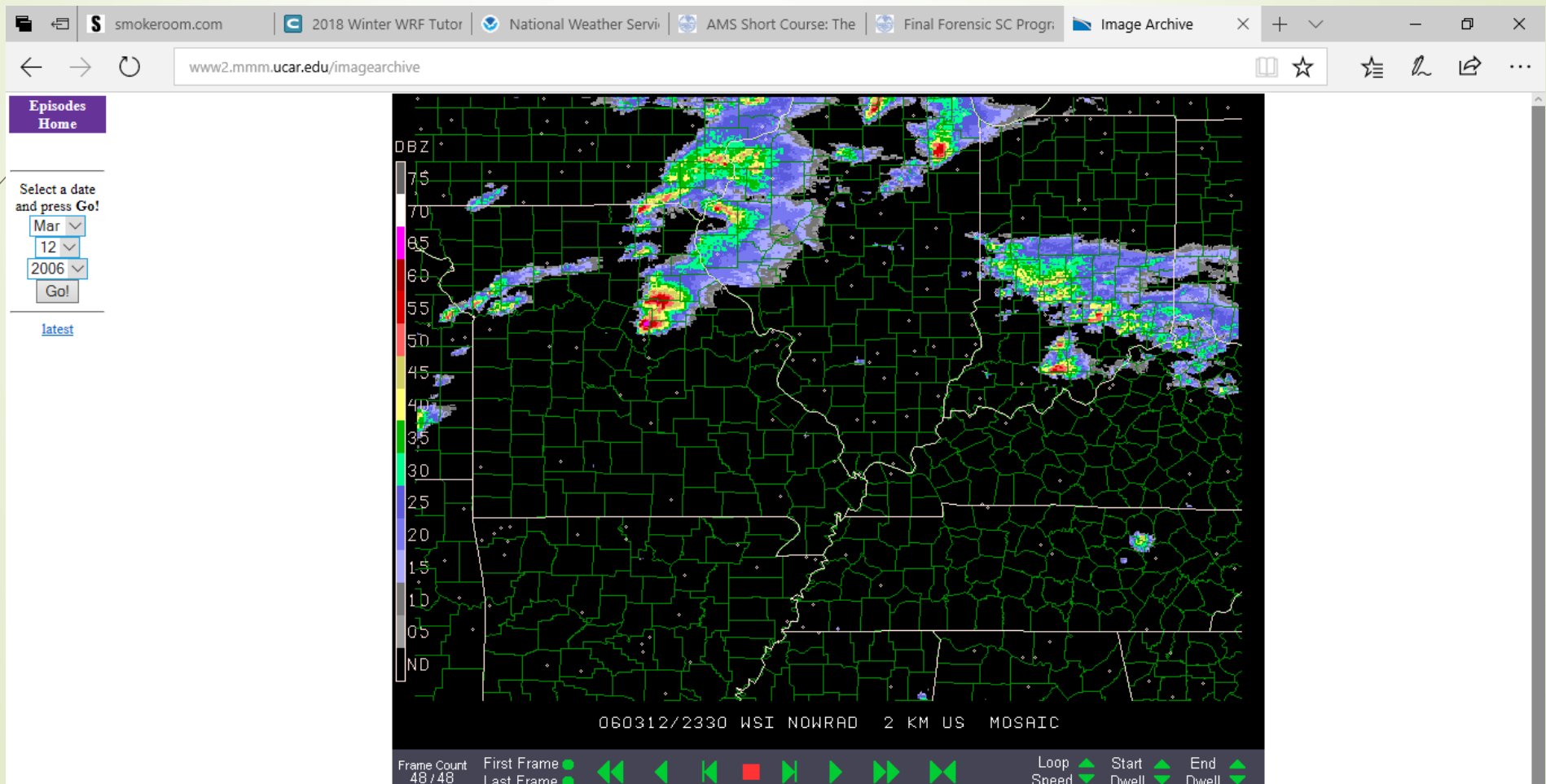



University Corporation for Atmospheric Research

- ▶ Let's try 12 March 2006 for Missouri, after choosing your date, go to your region:
- ▶ http://www2.mmm.ucar.edu/imagearchive1/RadarComposites/cent_missvly/20060312/cent_missvly_200603122330.gif
- ▶ Of course storm reports can be retrieved from the Storm Prediction Center:
<http://www.spc.noaa.gov>

University Corporation for Atmospheric Research

➤ The RADAR map



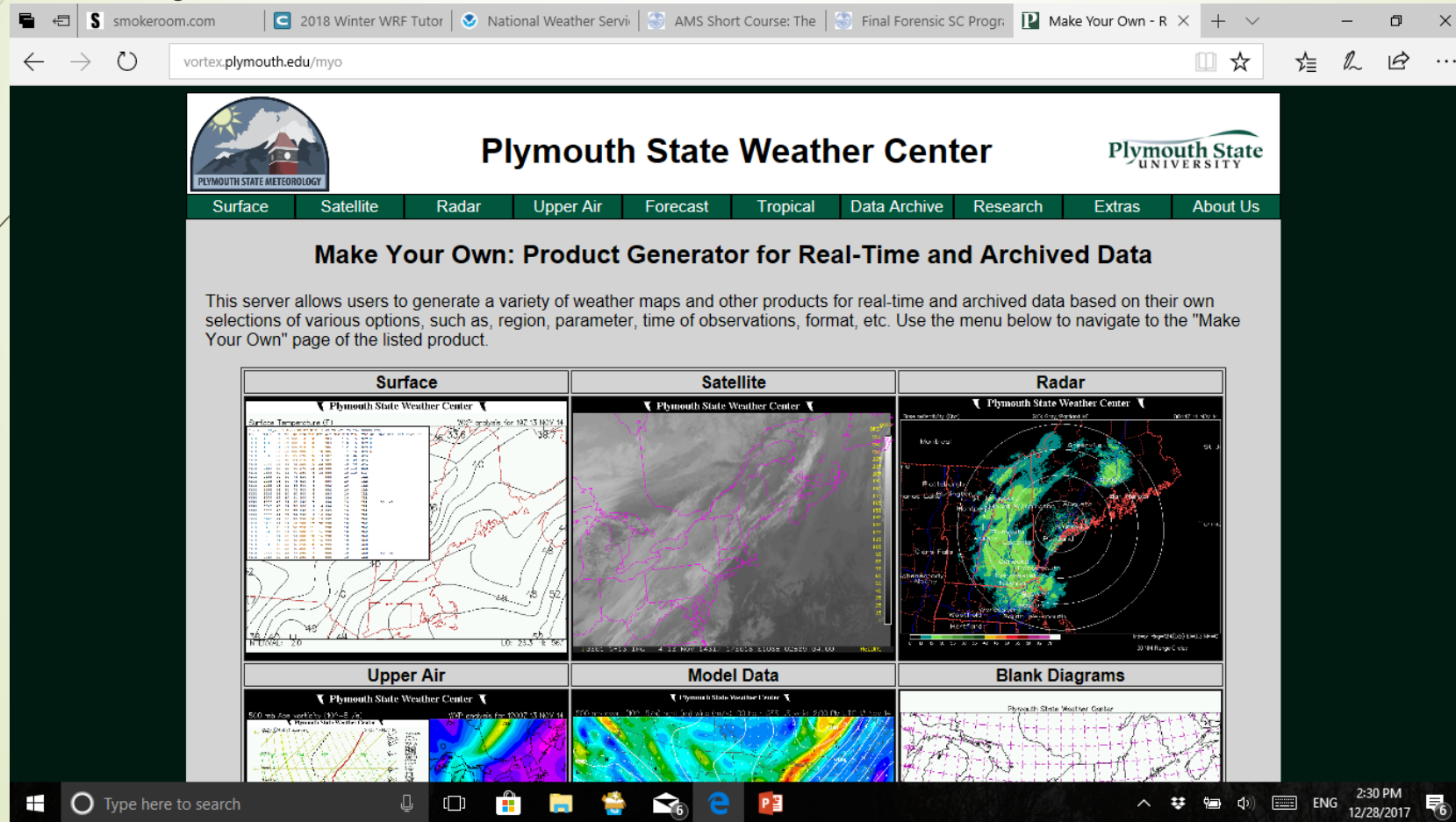



National Centers for Environmental Prediction

- Synoptic maps and thermodynamic profiles can be retrieved from many sources. Among these are:
- University of Wyoming Weather (<http://weather.uwyo.edu/>)
- UNISYS (<http://weather.Unisys.com>) – archive of images
- Plymouth State University Weather - (<http://http://vortex.plymouth.edu/myo/>)


National Centers for Environmental Prediction

► Plymouth State site:





National Centers for Environmental Prediction

- Of course, you may need to construct maps for a larger region than the USA and for a particular set of days or months.
 - The NCEP re-analyses not only provide observational data, but derived data as well.
- 

National Centers for Environmental Prediction

➤ The reanalysis site:

(<https://www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html>)

The screenshot shows a web browser window with the URL [esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html](https://www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html). The page header includes the NOAA logo and the text "Earth System Research Laboratory Physical Sciences Division". A search bar is visible on the right. The main navigation menu includes "Physical Sciences Division", "About", "Contact", "Research", "Data", "Products", "News/Events", and "Learn". The left sidebar lists "Climate Datasets: By Category" with options like "All", "Sub-daily", "Daily", "Monthly", "Surface", "Temperature", "SST", "Precipitation", "Land", "Ocean", "Multi-level", "Radiation", "Arctic", "Reanalysis", and "Climate Indices". The main content area features a title "NCEP/NCAR Reanalysis 1: Summary" and a brief description: "We have transitioned the data files from netCDF3 to netCDF4-classic format on Monday Oct 20th, 2014." Below this, there are sections for "Brief Description:", "Temporal Coverage:", and "Spatial Coverage:". The "Temporal Coverage:" section lists "4-times daily, daily and monthly values for 1948/01/01 to present" and "Long term monthly means, derived from data for years 1981 - 2010". The "Spatial Coverage:" section lists "Global Grids". A map titled ".995 Sigma Air T Dec 26, 2017 1981-2010 LTM" shows the mean Daily Air temperature at sigma level 995, with a color scale from -10 to 10 degK.

U.S. Department of Commerce | National Oceanic & Atmospheric Administration | NOAA Research

Earth System Research Laboratory
Physical Sciences Division

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Climate Datasets: By Category

- All
- Sub-daily
- Daily
- Monthly
- Surface
- Temperature
- SST
- Precipitation
- Land
- Ocean
- Multi-level
- Radiation
- Arctic
- Reanalysis
- Climate Indices

On this page: [Temporal Coverage](#) | [Spatial Coverage](#) | [Levels](#) | [Update Schedule](#) | [Download/Plot Data](#) | [Analysis Tools](#) | [Restrictions](#) | [Details](#) | [Caveats](#) | [File Naming](#) | [Citation](#) | [References](#) | [Original Source](#) | [Contact](#)

NCEP/NCAR Reanalysis 1: Summary

We have transitioned the data files from netCDF3 to netCDF4-classic format on Monday Oct 20th, 2014.

Brief Description:

- NCEP/NCAR Reanalysis 1

Temporal Coverage:

- 4-times daily, daily and monthly values for 1948/01/01 to present
- Long term monthly means, derived from data for years 1981 - 2010

Spatial Coverage:

- Global Grids

.995 Sigma Air T Dec 26, 2017 1981-2010 LTM
mean Daily Air temperature at sigma level 995 degK

-10 -8 -6 -4 -2 2 4 6 8 10

National Centers for Environmental Prediction

➡ The reanalysis site:

The screenshot shows a web browser window with the following tabs: smokeroom.com, 2018 Winter WRF Tutor, National Weather Servi, AMS Short Course: The, Final Forensic SC Progi, and ESRL : PSD : NCEP/I. The address bar shows the URL esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html.

Left Sidebar:

- Climate Indices
 - [Search Datasets](#)
 - [20th Century Reanalysis](#)
- Popular Datasets**
 - [ICOADS](#)
 - [NCEP/NCAR Reanalysis](#)
 - [N. American Regional Reanalysis](#)
- Plotting & Analysis**
 - [Basic Plots](#)
 - [Analysis Tools](#)
- Access**
 - [FTP Access](#)
 - [OPeNDAP Access](#)
- Software Resources**
 - [*Complete Data Resources*](#)
 - [About NetCDF](#)
 - [Reading Data in NetCDF Format](#)
- FAQ**
 - [Other Data Resources](#)
 - [Acronyms](#)
 - [How to Cite](#)
 - [Feedback](#)

Main Content Area:

Levels:

- 17 Pressure level and 28 sigma levels. N/A

Update Schedule:

- Daily

We have separated the data documentation into seven sections:

- [Pressure level](#)
- [Surface](#)
- [Surface Fluxes](#)
- [Other Fluxes](#)
- [Tropopause](#)
- [Derived Data](#)
- [Spectral Coefficients](#)

Usage Restrictions:

- None

Detailed Description:

- The NCEP/NCAR Reanalysis 1 project is using a state-of-the-art analysis/forecast system to perform data assimilation using past data from 1948 to the present. A large subset of this data is available from PSD in its original 4 times daily format and as daily averages. However, the data from 1948-1957 is a little different, in the regular (non-Gaussian) gridded data. That data was done at 8 times daily in the model, because the inputs available in that era were available at 3Z, 9Z, 15Z, and 21Z, whereas the 4x daily data has been available at 0Z, 6Z, 12Z, and 18Z. These latter times were forecasted and the combined result for this early era is 8x daily. The local ingestion process took only the 0Z, 6Z, 12Z, and 18Z forecasted values, and thus only those were used to make the daily time series and monthly means here.

National Centers for Environmental Prediction

➡ Click on pressure level data:

The screenshot shows a web browser window with the URL esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.pressure.html. The page content is as follows:

Temporal Coverage:

- 4-times daily, daily and monthly values for 1948/01/01 to present
- Long term monthly means, derived from data for years 1981 - 2010
- Values are instantaneous at the time indicated in the files

Spatial Coverage:

- 2.5 degree x 2.5 degree global grids (144x73)
- 0.0E to 357.5E, 90.0N to 90.0S

Levels:

- 17 Pressure levels (mb): 1000,925,850,700,600,500,400,300,250,200,150,100,70,50,30,20,10
- Some variables have less: omega (to 100mb) and Humidities (to 300mb).

Update Schedule:

- Daily

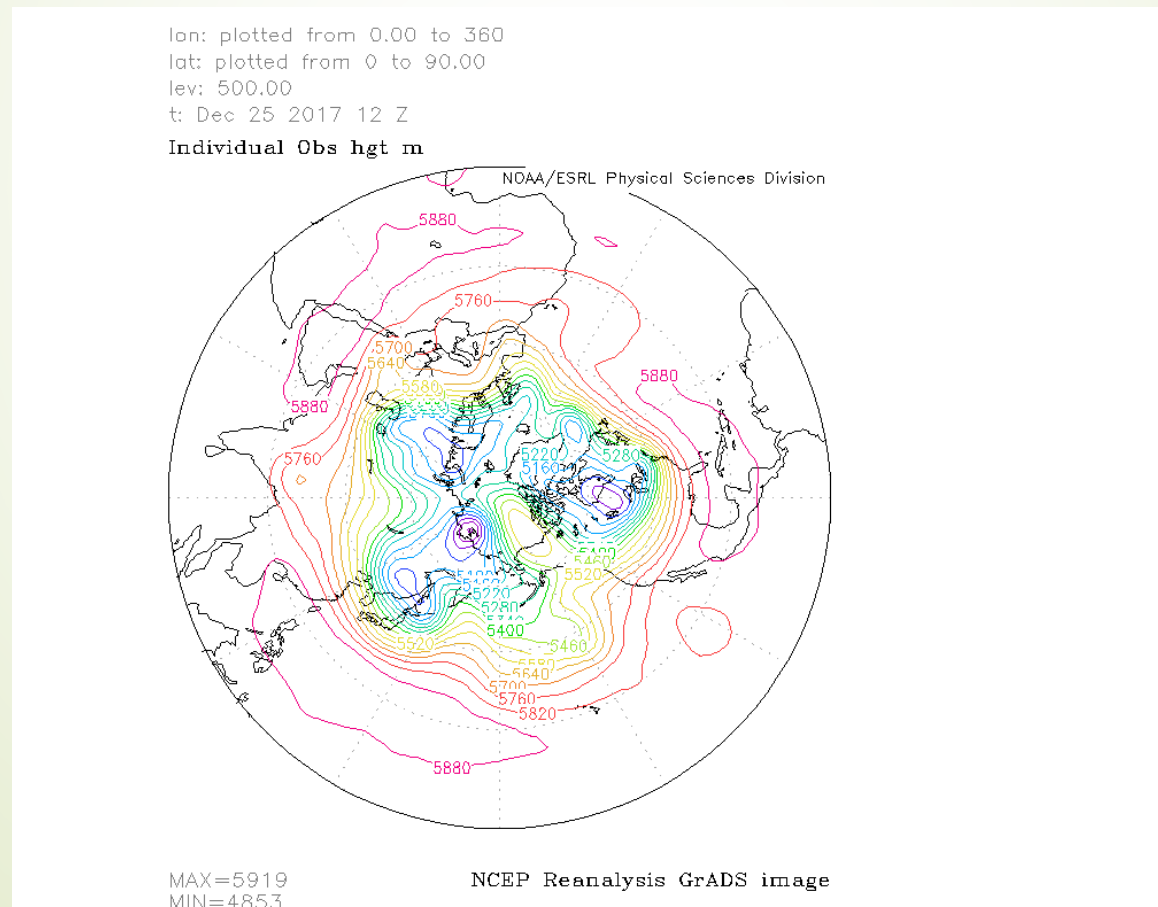
Download/Plot Data:

Variable	Statistic	Level	Download File	Create Plot/Subset
Air Temperature	4-times Daily	Pressure	see list	
Air Temperature	Daily	Pressure	see list	
Air Temperature	Monthly Mean	Pressure	air.mon.mean.nc	
Geopotential Height	4-times Daily	Pressure	see list	

The left sidebar of the page contains the following navigation links: Ocean, Multi-level, Radiation, Arctic, Reanalysis, Climate Indices, Search Datasets, 20th Century Reanalysis, Popular Datasets, ICOADS, NCEP/NCAR Reanalysis, N. American Regional Reanalysis, Plotting & Analysis, Basic Plots, Analysis Tools, Access, FTP Access, OPeNDAP Access, Software Resources, *Complete Data Resources*, About NetCDF, Reading Data in NetCDF Format, and FAQ.

National Centers for Environmental Prediction

- Let's get a 500 hPa map: (click on geopotential height – 4 times daily and create map. The site allows you to set your parameters)



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- ▶ I also like the 'products' header. Particularly "Map room" and "plotting and analysis"

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Climate Datasets: By Category

- All
- Sub-daily
- Daily
- Monthly
- Surface
- Temperature
- SST
- Precipitation
- Land
- Ocean
- Multi-level
- Radiation
- Arctic

On this page: [T](#)
[Re](#)

NCEP/NCAR Reanalysis 1:

We have transitioned the data files from netCDF3 to netCDF4 on Oct 20th, 2014.

Brief Description:

- NCEP/NCAR Reanalysis 1

Temporal Coverage:

- 4-times daily, daily and monthly values for 1948/01/01 to present
- Long term monthly means, derived from data for years 1981 - 2010

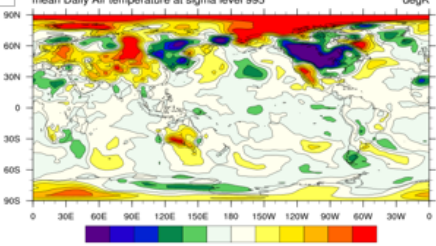
Spatial Coverage:

- Global Grids

[All](#)
[Experimental Forecasts](#)
[Experimental Monitoring](#)
[Map Room](#)
[Plotting & Analysis](#)
[GEFS Reforecast V2](#)
[Subseasonal Tropical Forecasts](#)
[Climate Change Web Portal](#)

[Levels](#) | [Update Schedule](#) | [Download/Plot Data](#) | [Analysis Tools](#)
[Plotting](#) | [Citation](#) | [References](#) | [Original Source](#) | [Contact](#)

.995 Sigma Air T Dec 26, 2017
1981-2010 LTM
mean Daily Air temperature at sigma level 995 degK



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Map Room

smokeroom.com | 2018 Winter WRF Tutor | National Weather Servi | AMS Short Course: The | Final Forensic SC Progr | ESRL : PSD : PSD M

esrl.noaa.gov/psd/map

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Map Room Links

Climate Products

- Sea Surface Temperature (SST)
- Outgoing Longwave Radiation (OLR)
- El Niño/La Niña
- Global Circulation: Means & Anomalies
- Reforecast Products

Weather Products

- Ensemble Forecasts
 - NCEP Operational
 - PSD Experimental
- Forecasts of Teleconnection Indices
- Current Weather

Other Links

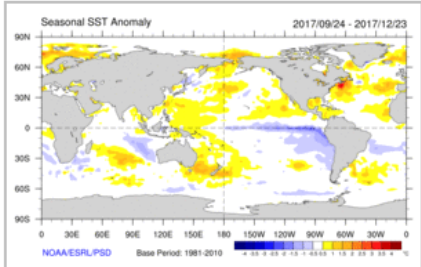
- Realtime TOGA-TAO
- Graphics Page
- CAWCR's OLR Products
- Climate Prediction Center
- Real-time Weather

PSD Map Room

These graphical products are not guaranteed to be updated on a regular basis. They are intended to serve as examples of our ongoing work. You are free to use and distribute these images, but we request that you acknowledge PSD when you do. See the [disclaimer](#) page for information on how to cite this work. Read more about the [weather and climate monitoring role](#) of the PSD Map Room. Please contact esrl.psd.maproom@noaa.gov for more information.

Climate Products

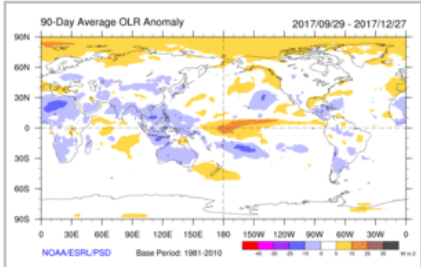
Sea Surface Temperature (SST)



Seasonal SST Anomaly 2017/09/24 - 2017/12/23

NOAA/ESRL/PSD Base Period: 1981-2010

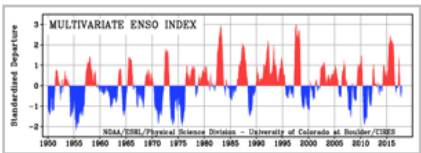
Outgoing Longwave Radiation (OLR)



90-Day Average OLR Anomaly 2017/09/29 - 2017/12/27

NOAA/ESRL/PSD Base Period: 1981-2010

El Niño/La Niña

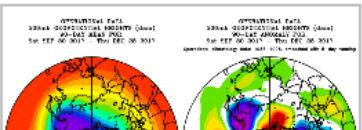


MULTIVARIATE ENSO INDEX

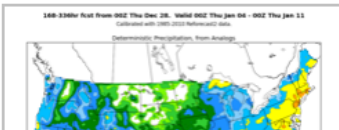
NOAA/ESRL/Physical Sciences Division - University of Colorado at Boulder/CIRES

Global Circulation: Means & Anomalies

OP: Daily or Animation RNL: Daily or Animation



Reforecast Products



1488 SSMR Run from 00Z Thu Dec 28, Valid 00Z Thu Jan 04 - 00Z Thu Jan 11

Calculated with 1981-2010 Reference Data

Deterministic Precipitation from Analysis

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- Plotting and Analysis – this page is very versatile

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PSD Interactive Climate Analysis and Plotting Web-Tools

Search for a page below, OR Jump to...

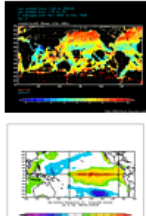
Type of analysis:	<input type="text" value="Any"/>	Variable:	<input type="text" value="Any"/>
Time scale:	<input type="text" value="Any"/>	Time range:	<input type="text" value="Any"/>
Dataset:	<input type="text" value="Any"/>	<input type="button" value="Reset"/>	<input type="button" value="Show Web Pages"/>

[Interactive climate/weather analysis webpages at other sites.](#) | [Help for this page](#)

Pages matching the search criteria above:

Search and Plot PSD Data
Search by variable or dataset from any PSD held dataset

Monthly/Seasonal Maps and Composites: NCEP/NCAR Reanalysis and other datasets
Plots monthly and seasonal composites of variables (mean, anomalies and long-term means). Lat/Lon plots for any desired region, and height cross sections are available



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➤ Example of the type of things you can do:

The screenshot displays the NOAA Earth System Research Laboratory Physical Sciences Division website. The main heading is "PSD Interactive Climate Analysis and Plotting Web-Tools". Below this, there is a search bar with the text "Search for a page below, OR Jump to..." and a dropdown menu showing "Monthly/Seasonal Maps and Composites: NCEP/NCAR Reanalysis and other datasets". A table of search results is visible, with columns for "Type of analysis:", "Time scale:", "Dataset:", "Variable:", and "Time range:". The "Type of analysis:" column lists various options like "Accumulated precipitation", "Anomaly", "Climatology", etc. The "Variable:" column has a dropdown menu set to "Any". The "Time range:" column has a dropdown menu set to "Any". There are also "Reset" and "Show Web Pages" buttons. To the right of the table, there is a link to "active climate/weather analysis webpages at other sites." and a link to "Help for this page". Below the table, there is a section titled "Monthly/Seasonal Maps and Composites: 20th Century Reanalysis" with a description: "Plot monthly/seasonal composites." On the right side of the page, there are three small thumbnail images of climate maps. The bottom of the screenshot shows a Windows taskbar with the search bar, taskbar icons, and system clock showing 2:49 PM on 12/28/2017.

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PSD Interactive Climate Analysis and Plotting Web-Tools

Search for a page below, OR Jump to... Monthly/Seasonal Maps and Composites: NCEP/NCAR Reanalysis and other datasets

Type of analysis:	Variable:	Time range:
Accumulated precipitation	Any	Any
Anomaly		
Climatology		
Compare two datasets		
Composite (average)		
Correlation		
ENSO relationships		
Individual value		
Ocean/Atmosphere time-series relationships		
Data subsetting		
Time-series extraction		
Regression		
Seasonal Forecast		
Time-section plots (Hovmoller)		
Wavelet analysis		
Sub seasonal forecast		
Trajectory		
Data Distributions		
Animations		

[active climate/weather analysis webpages at other sites.](#) | [Help for this page](#)

Monthly/Seasonal Maps and Composites: 20th Century Reanalysis
Plot monthly/seasonal composites.

Reanalysis and other datasets
anomalies and long-term means). Lat/Lon plots for any desired region, and height cross sections are available



The end

- Questions?
- Comments?
- Criticisms?
- Lupoa@Missouri.edu