

Ordering AVHRR data from NOAA's CLASS archive

IMPORTANT: In order to get data from **CLASS archive** you need to have a registered account. First navigate to **CLASS homepage**: <https://www.class.ngdc.noaa.gov>

- You should log in to your CLASS account. If you don't have an account on CLASS, you should first go to: https://www.class.ngdc.noaa.gov/saa/products/user_profile and then after you register, log in to CLASS.

NOAA HOME WEATHER OCEANS FISHERIES CHARTING SATELLITES CLIMATE RESEARCH COASTS CAREERS

NOAA COMPREHENSIVE LARGE ARRAY-DATA STEWARDSHIP SYSTEM (CLASS) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

» CLASS Home » Login » Register » Help » About CLASS » RSS

CLASS Help All NOAA

Please select a product to search

» GO

SEARCH FOR DATA

- Environmental Data from Polar-orbiting Satellites
- Environmental Data from Geostationary Satellites
- Defense Meteorological Satellite Program (DMSP)
- Suomi National Polar-orbiting Partnership (NPP)
- Sea Surface Temperature data (SST)
- RADARSAT
- Altimetry / Sea Surface Height Data (JASON)
- Global Navigation Satellite Systems (GNSS)
- Other - Miscellaneous products in CLASS

SEARCH COLLECTION METADATA

» GO

NEWS

Attention Satellite Users! (07/10/2017):
The GOES-R Peer Stakeholder - Product Validation Review for ABI L1b and CMI Provisional Maturity was held on June 1, 2017. As a result of this review, NOAA has confirmed that the ABI L1b and CMI data are at Provisional Validation Maturity as of June 1, 2017 (see [Readme](#) for details). This means that these products can be publicly accessed within the CLASS data family, GOES-R Series ABI Products (GRABIPRD).

While the GOES-16 ABI L1b and CMI data have reached provisional validation, please keep in mind that since GOES-16 satellite has not been declared operational, its data are still considered preliminary and undergoing testing.

Suomi NPP data access status (updated 01/11/17):
The majority of S-NPP products are available for ordering through CLASS website. These products are grouped under JPSS and S-NPP on the drop down product list. It is important to note the product/algorithm maturity levels from beginning dates to current dates by visiting the STAR JPSS Algorithm Maturity website at <https://www.star.nesdis.noaa.gov/jps/AlgorithmMaturity.php>.

For further assistance please check out the [STAR Science Documents](#) website for JPSS Algorithm Theoretical Basis Documents (ATBD), Users Guides, Cal/Val plans, and much more. If you have any questions please email

- On this page you need to go to the drop down menu and scroll through it and find **AVHRR**, as on the image below.

Please select a product to search

Please select a product to search

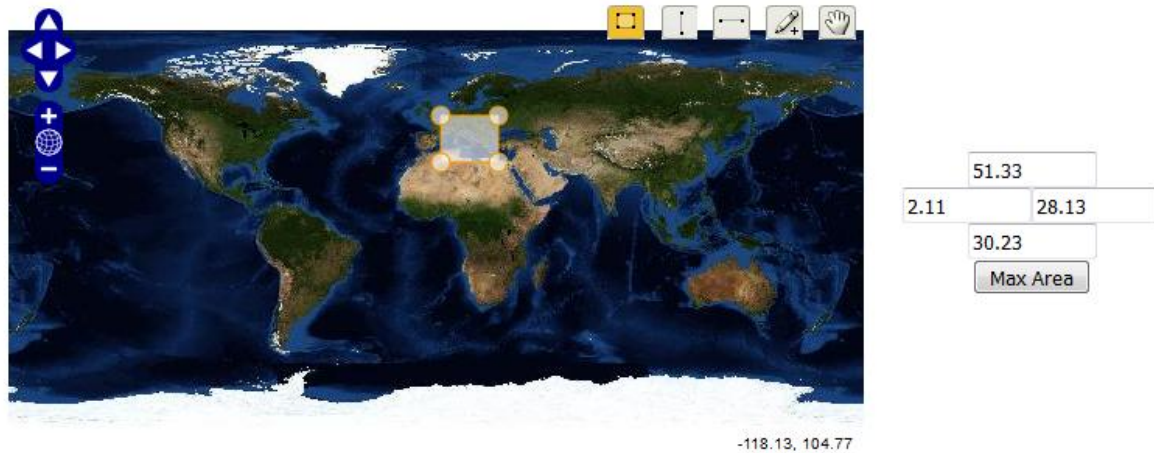
- Advanced Clear-Sky Products over Oceans (ACSP0)
- Advanced Scatterometer Level 1B (ASCAT)
- Advanced Very High Resolution Radiometer (AVHRR)**
- Aerosol Optical Thickness (100 KM) (AERO100)
- Blended Hydrometeorological (BLENDHYDRO)
- Climate Forecast System - Reanalysis (restricted data) (CFS-R)
- Coast Watch full resolution swath files in hdf format (CW_SWATH)
- CoastWatch Regions in HDF format (CW_REGION)
- CoastWatch, Alaska Regional Node (CWALA)

After you choose this option, you will be forwarded to a page where various information about AVHRR can be found. Also, on this page you will set the desired spatial and temporal coverage of the data you want to order. This will be described in few steps.

1. Spatial coverage

You will find a map in which you should select the desired area from which **you** want the data.

Spatial



In this example, wide area around Italy is selected. On the right hand side you can see the coordinates of the area's corners.

2. Temporal coverage

Since this is a LEO satellite instrument, you will have just the images when satellite passes over the area. You should set **your** desired date and time. In our example it is 01st September 2017, (12:00:00 – 14:59:59 UTC), as it is shown on the image below.

Temporal

(maximum range is 366 days)

Start Date (format: YYYY-MM-DD)	<input type="text" value="2017-09-01"/>		Start Time (UTC) (format: HH:MM:SS)	<input type="text" value="12:00:00"/>
End Date (format: YYYY-MM-DD)	<input type="text" value="2017-09-01"/>		End Time (UTC) (format: HH:MM:SS)	<input type="text" value="14:59:59"/>

Specify the range of the times for: Each Day Or The Entire Range Of Days

In order to find the data we want, we should pick the FRAC (Full Resolution Area Coverage) 1KM Level 1B data. This option should be ticked in the area Advanced Search as in the image below.

- Advanced Search

Datatype

- Full Resolution Area Coverage (FRAC) 1KM Level1B
- Global Area Coverage (GAC) 4KM Level 1B
- High Resolution Picture Transmission (HRPT) 1KM Level 1B
- Local Area Coverage (LAC) 1KM Level 1B

- When this selection is done, click on the button **Search** at the very bottom of this page (image below).

to place large order without reviewing inventory or granule (file) metadata.

to place small order after reviewing inventory and granule metadata, including browse images when available.

Now, we will get the table with results which all meet our requirements (date, time, etc.).

Advanced Very High Resolution Radiometer (AVHRR)

Data Product Search Results - AVHRR

(click here for a printable listing)

Recently Searched Data Sets: AVHRR

Displaying page 1 of approximately 1 page(s).
There are an estimated 2 hit(s).

There are 0 (AVHRR) items in your shopping cart. The shopping cart limit is 100.

Shopping Cart:

Select datasets...

View Details	Shopping Cart	Inventory ID	Datatype	Orbit	Start Time	End Time	Satellite	Dataset Name
<input type="button" value="1"/>	<input type="checkbox"/>	30237434	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56397	2017-09-01 09:23:01.107	2017-09-01 11:03:21.277	M02	NSS.FRAC.M2.D17244.S0923.E1103.B5639899.SV
<input type="button" value="2"/>	<input type="checkbox"/>	30237924	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56398	2017-09-01 11:02:43.277	2017-09-01 12:44:20.280	M02	NSS.FRAC.M2.D17244.S1102.E1244.B5639900.SV

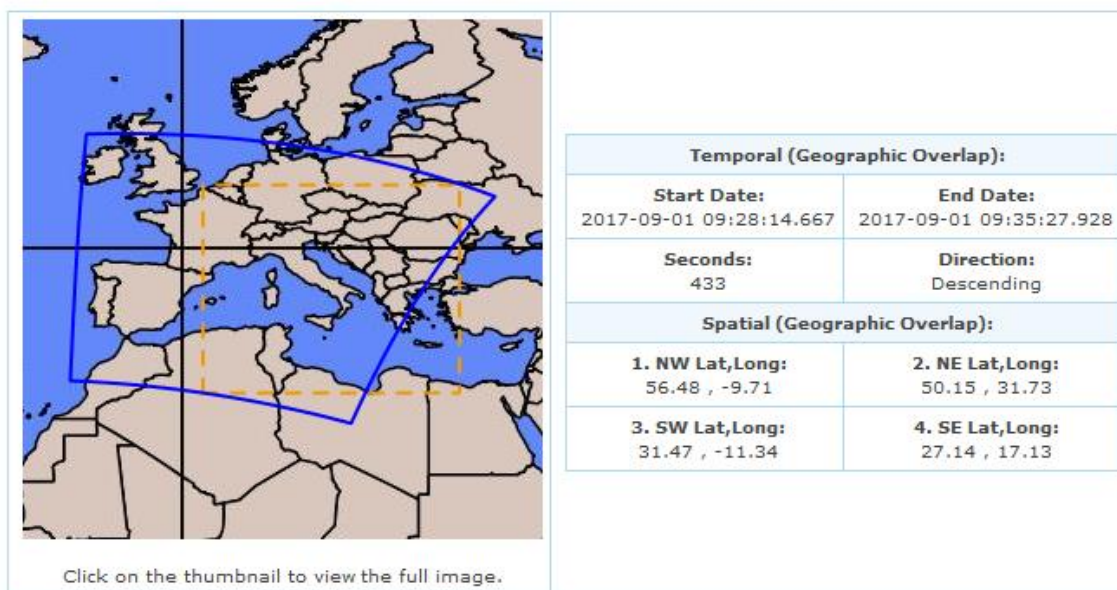
In our example we got only two hits and that is because we have set the date and time window pretty narrow. This means that in this particular case we have got 2 overpasses (judging by different start and end times) included in result list and that these two both include, at least to some part, our desired area. Sometimes it can be most of the area, and sometimes it is just small band or corner of the image. That is why we need to check which one fits us best.

- We can do this by clicking each of the numbers in the column “**View Details**” (inside the red rectangle, image below).

View Details	Shopping Cart	Inventory ID	Datatype	Orbit	Start Time	End Time	Satellite	Dataset Name
1	<input type="checkbox"/>	30237434	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56397	2017-09-01 09:23:01.107	2017-09-01 11:03:21.277	M02	NSS.FRAC.M2.D17244.S 0923.E1103.B5639899.SV
2	<input type="checkbox"/>	30237924	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56398	2017-09-01 11:02:43.277	2017-09-01 12:44:20.280	M02	NSS.FRAC.M2.D17244.S 1102.E1244.B5639900.SV

After clicking any of the numbers, we will get the page with the details of the dataset. Important thing to watch for is **Overlapped Region of Geographic Search**.

Overlapped Region of Geographic Search:



The one on the image is from the first hit of the search and this dataset (blue line) fits the best our desired area (orange dashed line). **HINT:** You can come back to the original search list just by clicking on the **“BACK”** button in your browser.

- When we are sure about which hit(s) meet our requirements the most, we should put them in our **Shopping Cart**, This is done by ticking the empty boxes (in our original search list) in that row (image below, marked red).

View Details	Shopping Cart	Inventory ID	Datatype	Orbit	Start Time	End Time	Satellite	Dataset Name
1	<input checked="" type="checkbox"/>	30237434	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56397	2017-09-01 09:23:01.107	2017-09-01 11:03:21.277	M02	NSS.FRAC.M2.D17244.S 0923.E1103.B5639899.SV
2	<input type="checkbox"/>	30237924	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56398	2017-09-01 11:02:43.277	2017-09-01 12:44:20.280	M02	NSS.FRAC.M2.D17244.S 1102.E1244.B5639900.SV

- Once we do this, we should click on the button “Go to Cart” placed above the table with results (in our original search list). **HINT:** This button will not appear if you are not logged in to your CLASS account.

Shopping Cart

There are 0 (AVHRR) items in your shopping cart. The shopping cart limits to 100.

View Details	Shopping Cart	Inventory ID	Datatype	Orbit	Start Time	End Time	Satellite	Dataset Name
1	<input checked="" type="checkbox"/>	30237434	Full Resolution Area Coverage (FRAC) 1KM Level 1B (AVHRR_FRAC)	56397	2017-09-01 09:23:01.107	2017-09-01 11:03:21.277	M02	NSS.FRAC.M2.D17244.S 0923.E1103.B5639899.SV
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This leads us to the **Shopping Cart**, where we once again see what our order includes.

Advanced Very High Resolution Radiometer (AVHRR) >>GO

Shopping Cart

Total size of selected data sets: 41,330,688 Bytes You will be notified at: gendjole@gmail.com

Number of data sets: 1 Order Comment:

+ **Advanced Options**

AVHRR

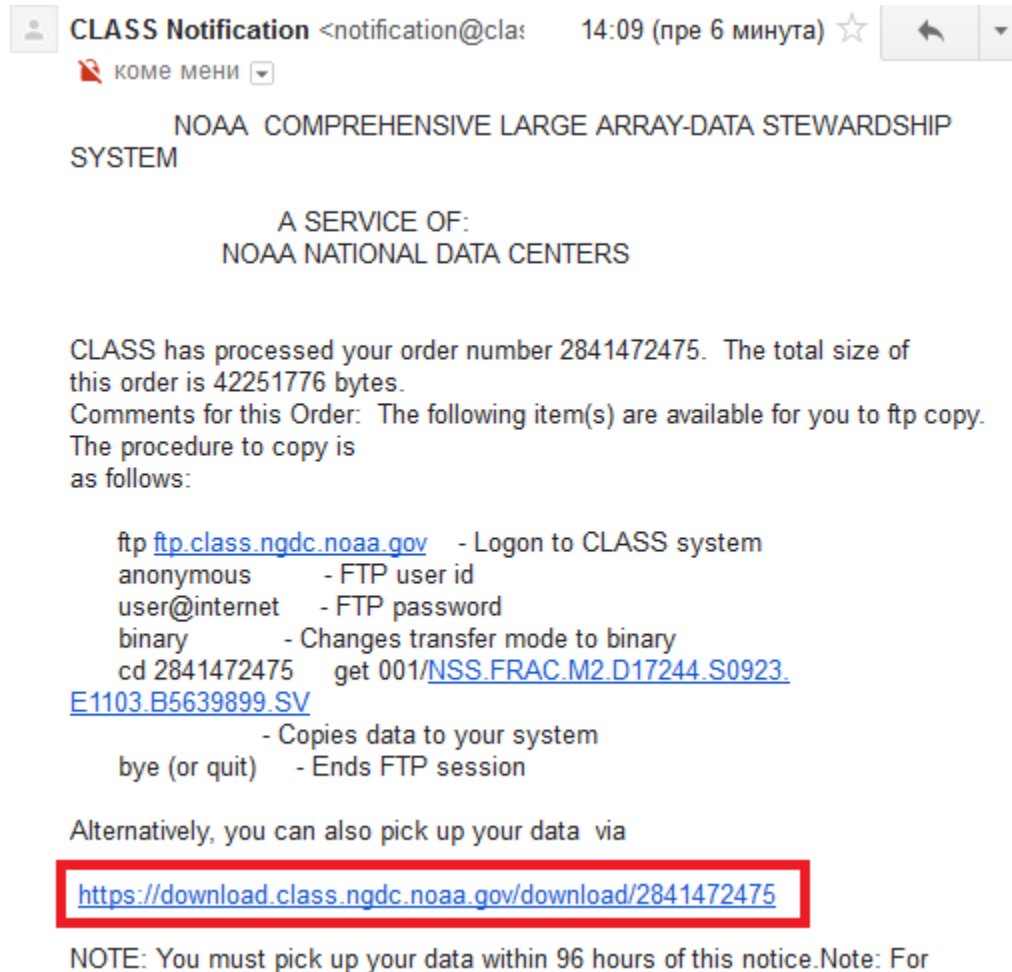
AVHRR Results AVHRR Search Page

Order	Dataset Name	Include Digital Signature	Include Archive Header	Scan Line Selection	Bits/Pixel	Channel Number	Spatial Resolution
<input checked="" type="checkbox"/>	Click on a dataset name to see the dataset details	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8 10 16	1 2 3 4 5	
<input checked="" type="checkbox"/>	AVHRR_FRAC NSS.FRAC.M2.D17244.S 0923.E1103.B5639899. SV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8 10 16	1 2 3 4 5	1

- If we are fine with the order, we should click the button “Place Order”, as in the image above.

This is the end of the ordering process.

Now, we watch on our email inbox, where we will get two emails. One will be about creation of the order, and the second one about completing the order. In the second email will be stated how to download the data in different ways (image below).



Use the option with the browser (marked with red in the image above). After clicking on it, you will get to the CLASS web pages where the data is stored, ready to be downloaded.

ADDENDUM

AVHRR SPECTRAL BANDS

Channel Number	Wavelength (um)	Typical Use
1	0.58 - 0.68	Daytime cloud and surface mapping
2	0.725 - 1.00	Land-water boundaries
3A	1.58 - 1.64	Snow and ice detection
3B	3.55 - 3.93	Night cloud mapping, sea surface temperature
4	10.30 - 11.30	Night cloud mapping, sea surface temperature
5	11.50 - 12.50	Sea surface temperature

Credit: NOAA