

Downloading VIIRS Active Fire Data

The user community will find four primary options available to download Suomi-NPP Visible/Infrared Imager/Radiometer Suite Active Fire data. The diagram below should help individuals choose their preferred method to access the data. Step-by-step instructions are provided in the next pages. Users are referred to the VIIRS Active Fire Science Team dedicated URL for more information involving the active fire data set:

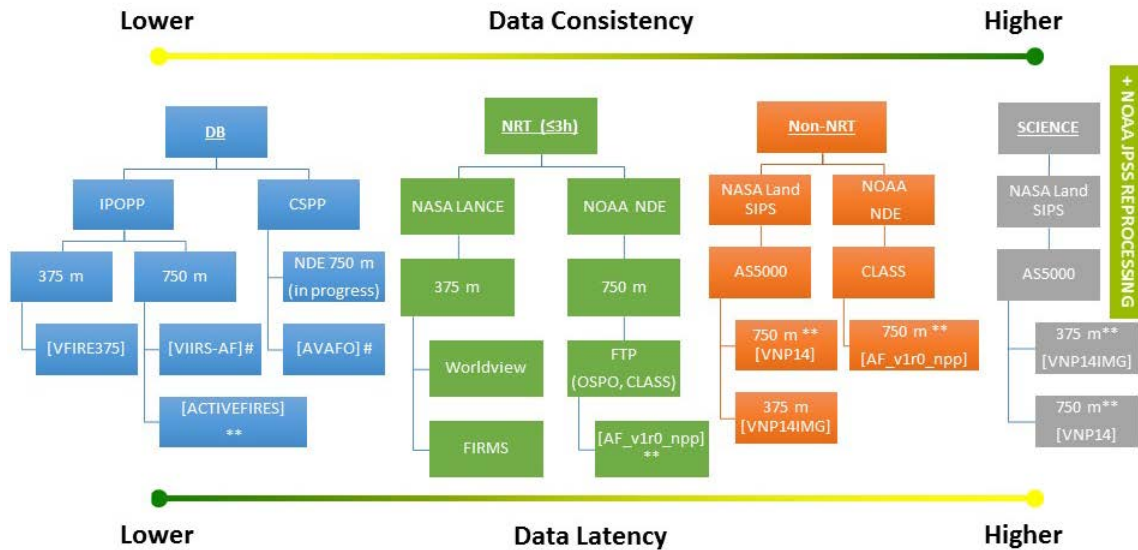
<http://viirsfire.geog.umd.edu/>

Please use the “Contact Us” form for submitting questions and/or comments. Questions and/or issues concerning product performance, including reporting of data anomalies should be directed to:

Dr. Wilfrid Schroeder (wschroed@umd.edu)

Dr. Louis Giglio (giglio@hermes.geog.umd.edu)

Figure 1: VIIRS Active Fire data access options

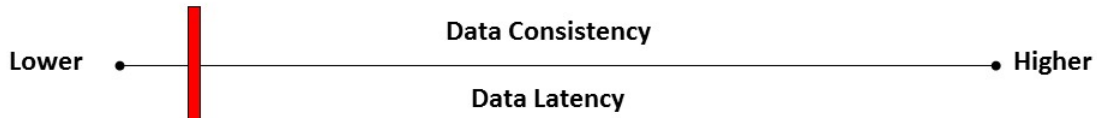


pattern indicates this directory is outdated
 ** marked products include FRP retrieval
 # marked products describe discontinued algorithm
 [] indicate official product name

When trying to figure out what data to get and where to get it, you should first understand what your need is. Do you need near-real time data, perhaps for situational awareness or are you looking for data consistency to conduct a long-term examination of fires? The above chart shows that with lower latency the trade

off is lower data consistency and vice-versa. The following diagrams and text will hopefully inform and guide you to decide what you need and where to get it. Keep in mind that the VIIRS AF product has been maturing and as such data structure, formats, directories for retrieval have changed. This information is current as of 01 February 2018 and will be updated as needed.

VIIRS Active Fire Product



Direct Broadcast (DB)

Direct Broadcast (DB) is the real-time transmission of satellite data to the ground. As the Earth is being observed by satellite instruments the data is formatted and transmitted to any user who have compatible ground receiving equipment and are in direct line of sight to the satellite. DB can provide end-users with VIIRS data in less than 1 hour.

The University of Wisconsin – Madison’s Space Science and Engineering Center (SSEC)

<ftp://ftp.ssec.wisc.edu/pub/eosdb/npp/viirs/>

The Goddard Space Flight Center’s Direct Readout Laboratory

<http://directreadout.sci.gsfc.nasa.gov/>

USDA Forest Service Remote Sensing Applications Center (RSAC)

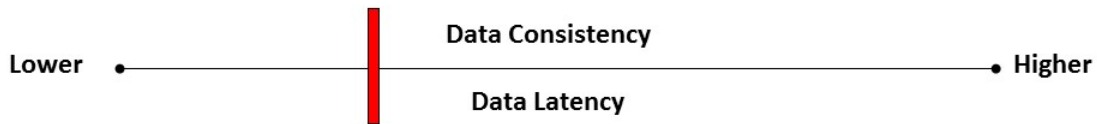
<http://activefiremaps.fs.fed.us>

Geographic Information Network of Alaska (GINA)

<http://www.gina.alaska.edu/data>

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VIIRS Active Fire Product



Near real-time
(NRT <3hr)

Near Real-Time (NRT) data and imagery from VIIRS instrument are available much quicker than routine processing allows. Most data products are available within 3 hours from satellite while imagery are generally available 3-5 hours after observation

NOAA Enterprise Algorithm (NDE) - ftp

<ftp://ftp-npp.class.ngdc.noaa.gov/>

- Select the calendar date of interest, select the *NDE-L2* directory and then the *VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm* directory

NASA LANCE

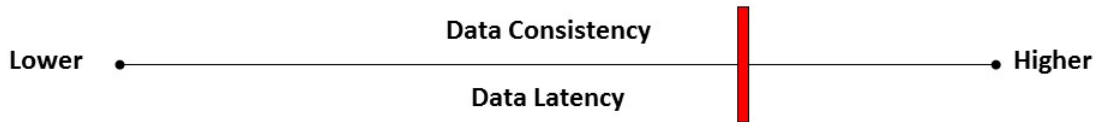
<https://earthdata.nasa.gov/earth-observation-data/near-real-time/rapid-response>

NASA WorldView

<https://worldview.earthdata.nasa.gov/>

Near Real-Time (NRT) data and imagery from VIIRS instrument are available much quicker than routine processing. Most data products are available within 3 hours from satellite while imagery are generally available 3-5 hours after observation.

VIIRS Active Fire Product



Non-NRT

This is the standard processing stream for NPP and VIIRS products. Latency is around 6 hours.

NOAA Enterprise Algorithm (NDE) - web

<http://www.class.noaa.gov/>

- Click on the drop-down bar labeled: "Please select a product to search" and select: *S-NPP Data Exploitation Granule Data (NDE_L2)*

**Currently, the VIIRS AF product is not available from LAADS **

NASA LAADS – web

<https://ladsweb.nascom.nasa.gov/search/index.html>

- Select *Suomi NPP VIIRS* under "Satellite/Instrument"
- Under "Group:", select *NPP Level 2 6-Minute Products*

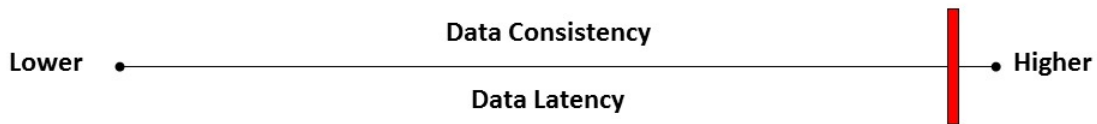
NASA LAADS - ftp

ladsweb.nascom.nasa.gov

- Change directory to */allData/5000*
- Select *VNP14 (M-band) or VNP14IMG (I-band)*

This is the standard processing stream for NPP and VIIRS products. Latency is around 6 hours.

VIIRS Active Fire Product



Science

Science quality data has undergone quality checks and been scrutinized before being archived. The data is periodically reprocessed to include algorithm updates. Latency is around 2 to 3 months.

NOAA Enterprise Algorithm (NDE) - web

<http://www.class.noaa.gov/>

- Click on the drop-down bar labeled: “Please select a product to search” and select: *S-NPP Data Exploitation Granule Data (NDE_L2)*

NASA LADS – web

<https://ladsweb.nascom.nasa.gov/search/index.html>

- Select *Suomi NPP VIIRS* under “Satellite/Instrument”
- Under “Group:”, select *NPP Level 2 6-Minute Products*

NASA LADS - ftp

ladsweb.nascom.nasa.gov

- Change directory to */allData/5000*
- Select *VNP14 (M-band) or VNP14IMG (I-band)*

Science quality data have undergone quality checks and been scrutinized before being archived. The data are periodically reprocessed to include algorithm updates. Latency is around 2 to 3 months.

Step-by-Step instructions to locate and retrieve data follow below

Option 1: NOAA CLASS Data Archive System (Web)

This should be your preferred option when downloading spatial subsets covering specific regions and time periods and therefore requires user input.

Step-by-step procedure:

- (1) Open an internet browser and go to <http://www.class.noaa.gov/>
- (2) First, you must register (first-time users) by clicking on the “*Register*” button near the top of the page. Enter your information and create a new user account
- (3) Login using your account information
- (4) Click on the drop-down bar labeled:
“*Please select a product to search*”
and select:
“*S-NPP Data Exploitation Granule Data (NDE_L2)*”
then click on:
“*Go*”
- (5) Choose spatial & temporal domains of interest
- (6) On “Datatype”, under select:
“*VIIRS Active Fire EDR (NOAA Enterprise Algorithm)*”
- (7) Click “*Search*”
- (8) On the new window containing the search results in tabular format, check the boxes in the “Shopping Cart” column containing the files of interest or alternatively click the “*Select All*” button above the table, and then click the “*Update*” button also located above the table. Note that you won’t be automatically redirected. In order to see you shopping cart, click on the “*Goto Cart*” button above the table.
- (9) In the shopping cart window, all selected files will be listed. By clicking on “Advanced Options” you will find additional options. Note that these do not apply to the Active Fire product but you may find it useful when ordering other VIIRS data sets. Note also that the NDE active fire product is distributed through the NOAA CLASS system as a ~84sec tiles and NetCDF format.
- (10) Click on the “*Place Order*” button
- (11) You will be notified via email once your order has been processed and the files are ready for download

Option 2: NOAA CLASS Data Archive System (ftp)

The most recent global NPP operational products are available in daily compressed files for download. This should be your preferred option when downloading global data sets from recent acquisition dates (up to the most recent 85 days of data are available) allowing for the use of ftp scripts. Data are provided as *.tar file bundles containing several ~84sec active fire **NetCDF** files each. Typically, two *.tar files will cover a 24h period.

Step-by-step procedure:

(1) Connect to:

Server: User: *anonymous*

Password: your email address

(2) Go to directory of your choice indicating the calendar date of interest and enter the line commands as demonstrated below:

```
cd 20160601 (this directory contains data acquired on 01 June 20161)  
cd NDE-L2/VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm  
bin  
prompt  
mget VIIRS*.tar  
bye
```

The commands above will download the following tar files to your machine:

```
NDE-L2_VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm_20160601_22263.tar  
NDE-L2_VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm_20160601_22273.tar  
NDE-L2_VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm_20160601_22283.tar  
NDE-L2_VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm_20160601_22293.tar  
NDE-L2_VIIRS-Active-Fire-EDR-NOAA-Enterprise-Algorithm_20160601_67405.tar
```

Together, these files should contain all ~5min active fire product tiles generated for 01 June 2016.

Additional data download options on next pages

¹ This directory is no longer available because only the recent 85 days are archived on the FTP

**** Currently the VIIRS AF product is not available from the LAADS sites listed below ****

Option 3: NASA LADS Data Archive System (ftp) – NetCDF

This should be your preferred option when downloading global data sets from any acquisition date allowing for the use of ftp scripts. Data are provided as individual active fire ~6min NetCDF files.

Step-by-step procedure:

(1) Connect to:

Server: *ladsweb.nascom.nasa.gov*

User: *anonymous*

Password: your email address

(2) Go to directory of your choice indicating the calendar date of interest and enter the line commands as exemplified below:

cd /allData/5000/

cd 2017/001 (this directory contains data acquired on 01 Jan 2017 where 001 indicates day of year [0-365/366])

bin

prompt

mget VNP14_d20130101_t10.h5*

bye

The commands above will download all active fire product files acquired during the 10th hour (UTC) on 01 Jan 2013 to your machine (i.e., ~10:00:00 – 10:59:59UTC).

Additional data download options on next page

Option 4: NASA LADS Data Archive System (ftp) – NetCDF

This should be your preferred option when downloading global data sets from any acquisition date allowing for the use of ftp scripts. Data are provided as individual active fire **6min NetCDF** files.

Step-by-step procedure:

(1) Connect to:

Server: *ladswb.nascom.nasa.gov*

User: *anonymous*

Password: your email address

(2) Go to directory of your choice indicating the calendar date of interest and enter the line commands as exemplified below:

cd /allData/5000/VNP14

cd 2017/001 (this directory contains data acquired on 01 Jan 2017 where 001 indicates the day of year [0<>365-366])

bin

prompt

mget VNP14.A2013001.10.nc*

bye

The commands above will download all active fire product files acquired during the 10th hour (UTC) on 01 Jan 2013 to your machine (i.e., 10:00:00 – 10:59:59UTC).