

# MODIS 数据下载简要说明

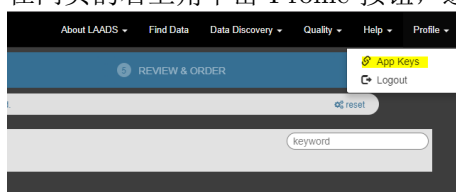
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2018 年 5 月 16 日

以下以 MODIS 的 NPP 为例，简要说明下载流程。

## 1 App Key 的生成

首先登陆 <https://ladsweb.nascom.nasa.gov/search/>，需要注册一个账号，在网页的右上角单击 Profile 按钮，选择 AppKeys。



在弹出的页面中，随意输入 Description，单击”Create New App Key”按钮，生成一个 App Key，请在下方的表格中记下这个 App Key，后面会用到。

LAADS Profile

App Keys

Description  Create New App Key

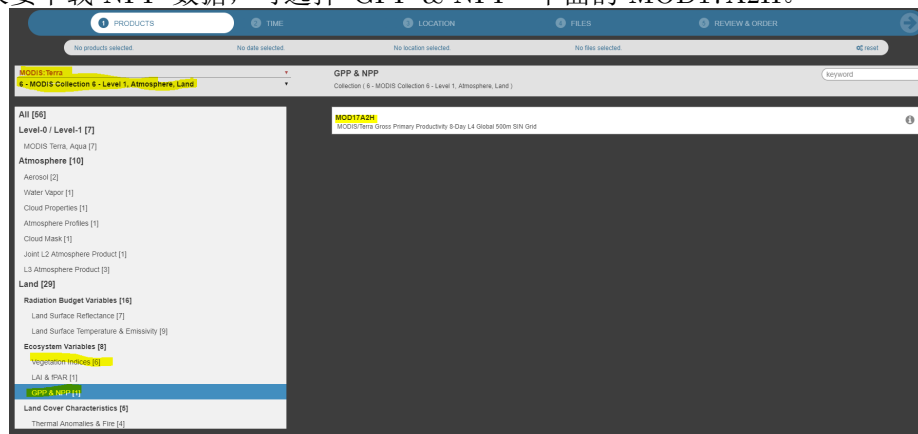
Description	Key	
test	72AA747E-58A3-11E8-B860-000000000000	<button>Delete</button>

Last updated: February 21, 2018

## 2 数据资源选择

### 2.1 产品选择

卫星选择 MODIS:Terra, Collection 选择 6 - MODIS Collection 6。如果要下载 NDVI 数据,选择 Vegetation Indices 下面的 MOD13A1/Q1/A2/A3。如果要下载 NPP 数据,可选择”GPP & NPP” 下面的 MOD17A2H。

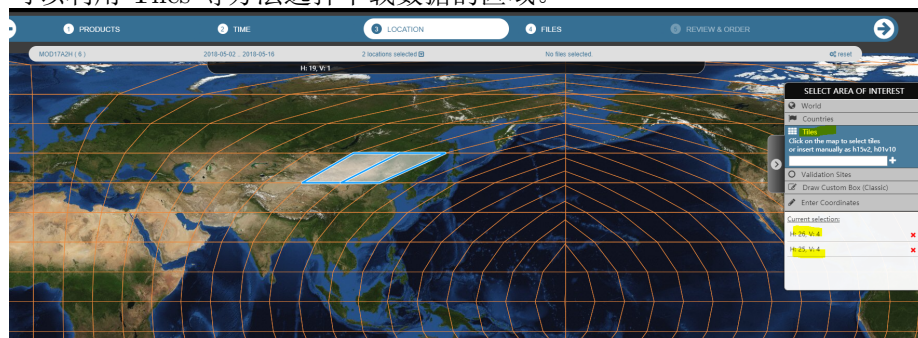


### 2.2 时间选择

略

### 2.3 位置选择

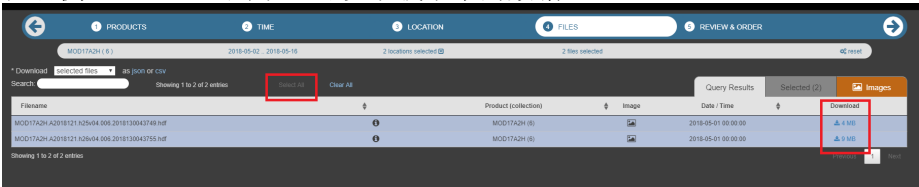
可以利用 Tiles 等方法选择下载数据的区域。



## 2.4 数据文件选择

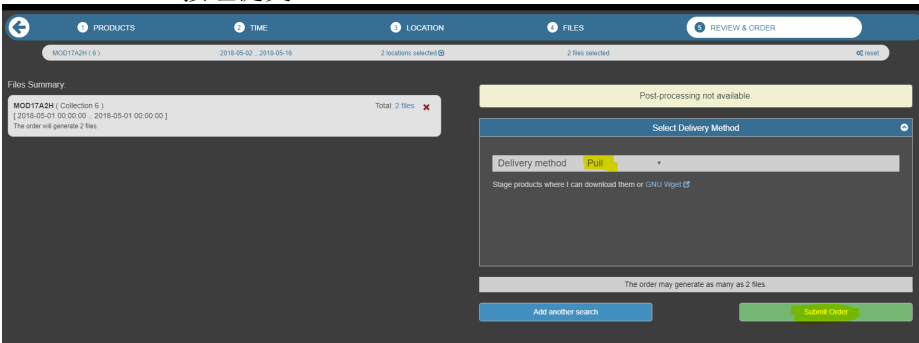
在这个页面中，检查时间与位置的选择是否正确，文件的数量是否正确。如果正确，单击“Select All”选择全部数据。

在右侧 Download 列下，可以下载单个的数据。



## 2.5 数据提交

在这个页面中，在”Select Delivery Method” 下面选择”Pull”，然后单击”Submit Order” 按钮提交。



# 3 Wget 的配置

## 3.1 Wget 的下载

在 <https://eternallybored.org/misc/wget/> 页面中下载 Wget 的最新版本。

## Windows binaries of GNU Wget

A command-line utility for retrieving files using HTTP, HTTPS and FTP protocols.

**Warning:** some antivirus tools recognise wget-1.19.4-win32.zip as **potentially dangerous**. The file that triggers the warning is wget.exe.gdb, which contains debugging symbols for wget.exe, and isn't even executable. If your AV is giving you trouble, and you don't need the documentation or debug symbols, you can download wget.exe directly, or switch to a less broken security product.

All of the binaries are compiled statically, meaning that wget.exe doesn't require any other files to work.

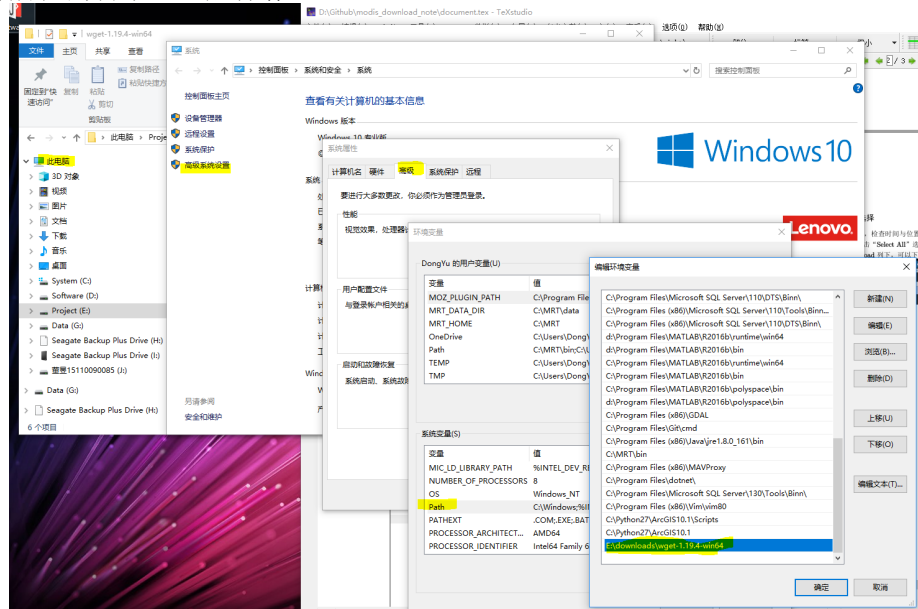
Version	32-bit binary	64-bit binary	Notes
1.19.4	wget-1.19.4-win32.zip, wget.exe	wget-1.19.4-win64.zip, wget.exe	OpenSSL 1.1.0g, Zlib 1.2.11, gpgme-1.10.0, taskbar progressbar, Windows certificate store support, manual
1.19.3	wget-1.19.3-win32.zip, wget.exe	wget-1.19.3-win64.zip, wget.exe	OpenSSL 1.1.0g, Zlib 1.2.11, gpgme-1.10.0, taskbar progressbar, Windows certificate store support, manual
1.19.2	wget-1.19.2-win32.zip, wget.exe	wget-1.19.2-win64.zip, wget64.exe	OpenSSL 1.1.0f, Zlib 1.2.11, taskbar progressbar, Windows certificate store support, manual
1.19.1	wget-1.19.1-win32.zip	wget-1.19.1-win64.zip	OpenSSL 1.1.0e, Zlib 1.2.11, taskbar progressbar, Windows certificate store support, manual
1.18	wget-1.18-win32.zip	wget-1.18-win64.zip	OpenSSL 1.0.2h, Zlib 1.2.8, taskbar progressbar, Windows certificate store support, manual
1.17.1	wget-1.17.1-win32.zip	wget-1.17.1-win64.zip	OpenSSL 1.0.2e, Zlib 1.2.8, taskbar progressbar, Windows certificate store support, manual
1.17	wget-1.17-win32.zip	wget-1.17-win64.zip	OpenSSL 1.0.2d, Zlib 1.2.8, taskbar progressbar, man page
1.16.3	wget-1.16.3-win32.zip	wget-1.16.3-win64.zip	OpenSSL 1.0.2a, Zlib 1.2.8, taskbar progressbar, man page
1.16.2	wget-1.16.2-win32.zip	wget-1.16.2-win64.zip	OpenSSL 1.0.2, Zlib 1.2.8, taskbar progressbar, man page
1.16.1	wget-1.16.1-win32.zip	wget-1.16.1-win64.zip	OpenSSL 1.0.1j, Zlib 1.2.8, taskbar progressbar, man page
1.16	wget-1.16-win32.zip	wget-1.16-win64.zip	OpenSSL 1.0.1j, Zlib 1.2.8, taskbar progressbar, man page
1.15	wget-1.15-win32.zip	-	OpenSSL 1.0.1f, Zlib 1.2.8
1.13.4	wget-1.13.4-win32-static.zip	-	OpenSSL 1.0.0f, Zlib 1.2.5
1.13	wget-1.13-win32-static.zip	-	OpenSSL 1.0.0d, Zlib 1.2.5

[Source code](#)

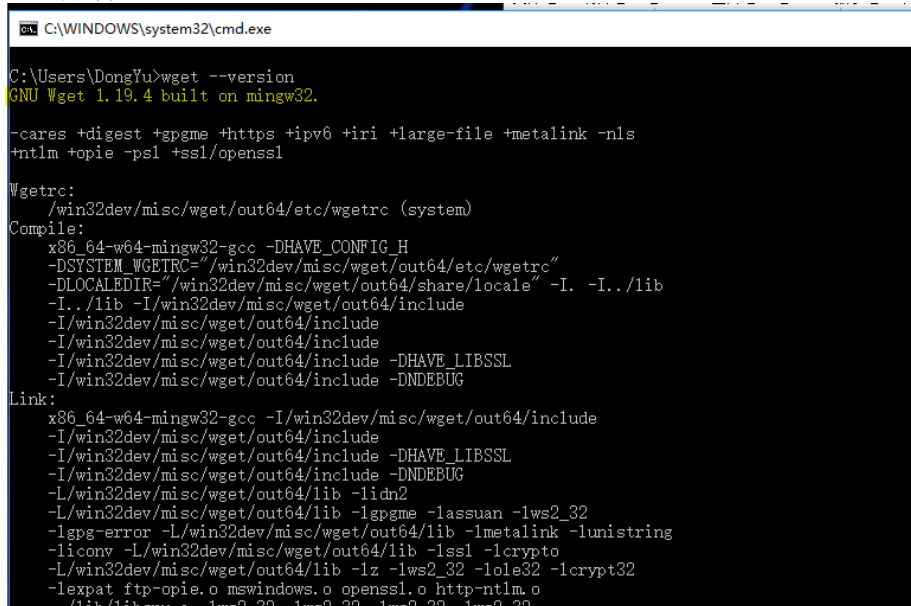
解压文件，找到 wget.exe 文件。

## 3.2 Wget 环境变量配置

在计算机 (或者“我的电脑”) 上单击鼠标右键，选择属性按钮。在弹出的对话框中单击“高级系统设置”，选择“高级”选项卡，单击下方的“环境变量”按钮，找到系统变量下面的 Path 变量，双击进行编辑，添加 wget.exe 文件所在的目录，之后保存。



按下 Ctrl+R 按钮，打开”运行”对话框，输入 cmd 回车打开命令提示符。在命令提示符中输入 wget --version 回车，如果出现 wget 版本号，则表示配置成功。



```
C:\WINDOWS\system32\cmd.exe

C:\Users\DongYu>wget --version
GNU Wget 1.19.4 built on mingw32.

-cares +digest +gpgme +https +ipv6 +iri +large-file +metalink -nl
+ntlm +opie -psl +ssl/openssl

Wgetrc:
/win32dev/misc/wget/out64/etc/wgetrc (system)
Compile:
x86_64-w64-mingw32-gcc -DHAVE_CONFIG_H
-DSYSTEM_WGETRC="/win32dev/misc/wget/out64/etc/wgetrc"
-DLOCALEDIR="/win32dev/misc/wget/out64/share/locale" -I. -I../lib
-I../lib -I/win32dev/misc/wget/out64/include
-I/win32dev/misc/wget/out64/include
-I/win32dev/misc/wget/out64/include
-I/win32dev/misc/wget/out64/include -DHAVE_LIBSSL
-I/win32dev/misc/wget/out64/include -DNDEBUG
Link:
x86_64-w64-mingw32-gcc -I/win32dev/misc/wget/out64/include
-I/win32dev/misc/wget/out64/include
-I/win32dev/misc/wget/out64/include -DHAVE_LIBSSL
-I/win32dev/misc/wget/out64/include -DNDEBUG
-L/win32dev/misc/wget/out64/lib -lidn2
-L/win32dev/misc/wget/out64/lib -lgpgme -lassuan -lws2_32
-lpg-error -L/win32dev/misc/wget/out64/lib -lmetalink -lunistring
-liconv -L/win32dev/misc/wget/out64/lib -lssl -lcrypto
-L/win32dev/misc/wget/out64/lib -lz -lws2_32 -lole32 -lcrypt32
-lexpat ftp-opie.o mswindows.o openssl.o http-ntlm.o
/lib/libm.a -lws2_32 -lws2_32 -lws2_32 -lws2_32 -lws2_32
```

## 4 数据下载

打开 NASA 发来的订单成功的邮件，找到如下图所示的命令。

Your Order ID is: 501235487

FTP access has been DEPRECATED in LAADS. We strongly suggest you migrate to using the HTTP access instructions. Additional information on FTP deprecation and HTTP access methods is available at: <https://ladsweb.modaps.eosdis.nasa.gov/tools-and-services/data-download-scripts/>

The data you ordered will be staged (in about 10 minutes), and you can retrieve the data through HTTP using GNU wget. If you do not have wget:

- Windows users can download it at <https://eternallybored.org/misc/wget/>
- Mac OS X users can install it using Homebrew (<https://brew.sh>) using the command 'brew install wget'
- Additional information on wget is available at <https://www.gnu.org/software/wget/faq.html>

Alternatively, you may use an HTTP script from the data-download-scripts URL above, or manually download all files from <https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/>

```
wget -e robots=off -m -np -R .html,.tmp -nH --cut-dirs=3 \
https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/ \
--header "Authorization: Bearer <your appKey>" -P <target dir>
```

Replace the <your appKey> placeholder with your appKey. AppKeys can be created and retrieved at: <https://ladsweb.modaps.eosdis.nasa.gov/profile/app-keys/>

Replace the <target dir> placeholder with the directory where you wish to save the files.

Explanation of additional options used:

- e robots=off : Bypass the robots.txt file, to allow access to all files in the order
- m : Enable mirroring options (-r -N -l inf) for recursive download, timestamping & unlimited depth
- np : Do not recurse into the parent location
- R .html,.tmp : Reject (do not save) any .html or .tmp files (which are extraneous to the order)
- nH : Do not create a subdirectory with the Host name ([ladsweb.modaps.eosdis.nasa.gov](https://ladsweb.modaps.eosdis.nasa.gov))
- cut-dirs=3 : Do not create subdirectories for the first 3 levels (archive/orders/501235487)
- header : Adds the header with your appKey (which is encrypted via SSL)
- P : Specify the directory prefix (may be relative or absolute)

Order 501235487 contains 60 file

- If your submission required additional post-processing you will be notified when these files become available

\*NOTE: The files will be deleted after 5 days, please download the files before they get deleted.

For help, please contact us at [modapsuso@lists.nasa.gov](mailto:modapsuso@lists.nasa.gov)

Thank you,

The LAADS Support Team

将这一条命令复制到文本文档中，进行如下操作：

- (1) 将所有的“\” 修改为“^”。
- (2) 将 <your appKey> 修改为第一步中的 App Key。
- (3) 将 <target dir> 修改为数据的下载目录。

如下图所示。

```
无标题 - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)
wget -e robots=off -m -np -R .html,.tmp -nH --cut-dirs=3 ^
https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/ ^
--header "Authorization: Bearer 72AA747E-58A3-11E8-8000-000000000000" -P D:\downloads
```

复制上面的命令，在命令提示符中单击鼠标右键粘贴，回车运行，出现下面的界面即为开始下载。

```
Wget [0%] https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/MYD02CRS.A2018122.0445.061.2018124115121.hdf

C:\Users\DongYu>wget -e robots=off -m -np -R .html,.tmp -nH --cut-dirs=3 ^
More?      https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/ ^
More?      --header 'Authorization: Bearer 72AA747E-58A3-11E8-8000-000000000000' -P .
--2018-05-16 10:24:54-- https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/
Resolving ladsweb.modaps.eosdis.nasa.gov (ladsweb.modaps.eosdis.nasa.gov)... 2001:4d0:241a:40c0::40, 198.118.194.40
Connecting to ladsweb.modaps.eosdis.nasa.gov (ladsweb.modaps.eosdis.nasa.gov)[2001:4d0:241a:40c0::40]:443... failed: Unknown error.
Connecting to ladsweb.modaps.eosdis.nasa.gov (ladsweb.modaps.eosdis.nasa.gov)[198.118.194.40]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: './index.html.tmp'

index.html.tmp      [ <=> ] 31.76K --KB/s in 0.001s

Last-modified header missing -- time-stamps turned off.
2018-05-16 10:25:17 (26.2 MB/s) - './index.html.tmp' saved [32524]

Removing ./index.html.tmp since it should be rejected.

--2018-05-16 10:25:17-- https://ladsweb.modaps.eosdis.nasa.gov/archive/orders/501235487/MYD02CRS.A2018122.0445.061.2018124115121.hdf
Reusing existing connection to ladsweb.modaps.eosdis.nasa.gov:443.
HTTP request sent, awaiting response... 200 OK
Length: 11385130 (11M) [application/x-hdf]
Saving to: './MYD02CRS.A2018122.0445.061.2018124115121.hdf'

MYD02CRS.A2018 0%[ ] 0 --KB/s
```