Tutorial - Converting GNC-A HDF-EOS files to GeoTIFF using a Graphical Interface

In GEONETCast-Americas broadcast there are **HDF-EOS** files provided by NOAA-NESDIS.

They are from different satellites (**Metop-A/B, NOAA-15/18/19, DMSP**) and instruments (**AMSU-A, MHS and SSM/I**). Some are received daily and some several times a day.

You may find the description of these files in the GEONETCast Americas product list.

With them you can retrieve information about **Rain Rate, Ice Water Path, Snow, Snow Water equivalent, Snow Fall Rate, Total Precipitable Water, Cloud Liquid Water, Surface Temperature, 23.8 GHz Emissivity, 31.4 GHz Emissivity, 50.3 GHz Emissivity and Sea Ice** in a global scale.

Please find below a procedure to convert these HDF-EOS files to our well known **GeoTIFF** format using a graphical interface (command line operations are possible but is not covered in this tutorial).

1-) First of all, download a sample of the "**METOP-A - MSPPS AMSU-A Daily Product**" from February 23 at the following link:
https://www.dropbox.com/s/tqfv8dm3ekh52c1/PRD.AADM.M2.D15054?raw=1
(you may find all the HDF-EOS products at the **"incoming/NOAA-NESDIS"** folder in your GEONETCast-Americas stations).
Move the downloaded file to your preferred folder (in this example **"C:\VLAB"**).

2-) Go to the following link and download the **"HEG"** (**H**DF-**E**OS to **G**eoTIFF) software provided by NASA for your preferred OS: http://newsroom.gsfc.nasa.gov/sdptoolkit/HEG/HEGDownload.html
(in this procedure, we used the Windows 32-bit version and the zip file name is **"hegWINv2.12_32.zip"**)

3-) Unzip the file in your preferred folder (in this example **"C:\HEG"**).

4-) After unzipping it, double click on **"install.bat"**. A DOS command prompt will be opened and will ask **"Do you wish to proceed with the HEG installation? [y/n]"**. Type **"y"** and click enter.

5-) Now the software will ask **"Enter the HEG full directory path:"**. Enter the directory path where you unzipped the downloaded file.

IMPORTANT: When the software asks for a directory, AWAYS replace each backslash '\' with a forward slash '/'.

In this example, I typed **"c:/HEG"** and clicked enter. The software will ask: **"Proceed with install into c:/HEG? [y/n]"**. Type **"y"** and click enter.

6-) Now the software will ask **"Please enter the path to your Java bin directory:"** (there must be a recent java package installed!).
In this procedure, the java bin folder is located at ***"C:\Program Files\Java\jre7\bin"***, so we used **"C:/Program Files/Java/jre7/bin"** and clicked enter.

7-) Now the software will ask **"Please enter a username used internally by HEG (e.g. SHARON):"**. Enter your name or anything you want and click enter.

8-) Now the software will ask **"Press the Enter key to create HEGToll.bat for this installation"**. Click enter. Finally, the software will ask **"Press the Enter key to finish the HEG installation"**. Click enter again.
The HEG software is installed!

9-) Double click in the **"HEGToll.bat"** located at **"C:/HEG/HEG_Win/bin"** to execute the software (remember that the directory in red is to one you first unzipped the download file!).

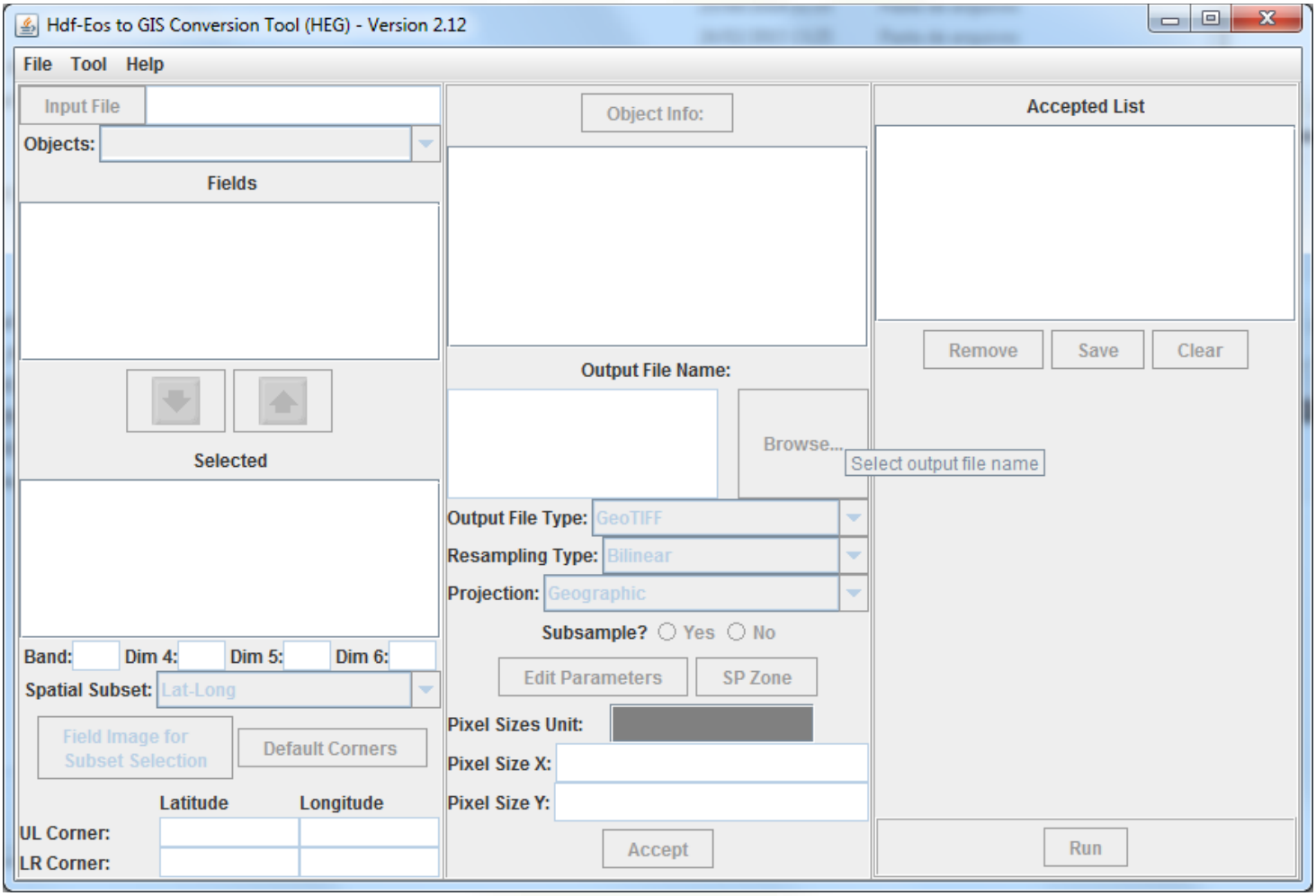

Figure 1: HEG software main window

10-) Click on **"File"** -> **"Open"** -> **"HDF-EOS"**, choose the sample file you downloaded in step 1 (PRD.AADM.M2.D15054) and click **"Open"**.

In the **"Fields"** list, click on **"Acs_Tsfc"** (which corresponds to the Land Surface Temperature - METOP-A Ascending Passes from 02/23/2015) and click on the button with the **blue narrow pointing down**...

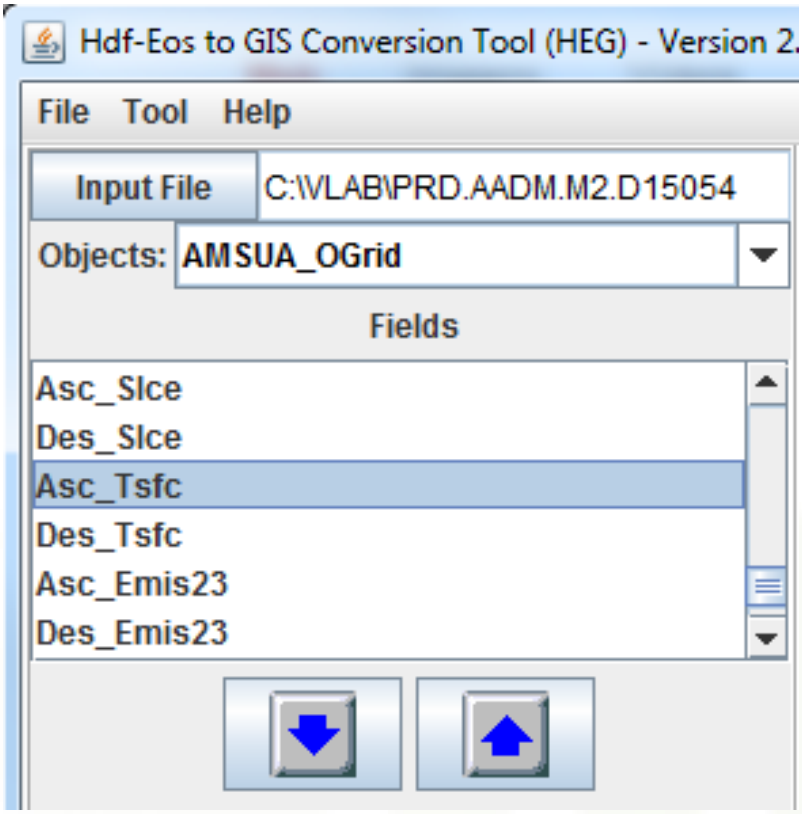

Figure 2: Selecting the Surface Temperature field

...click on the **"Accept"** button...

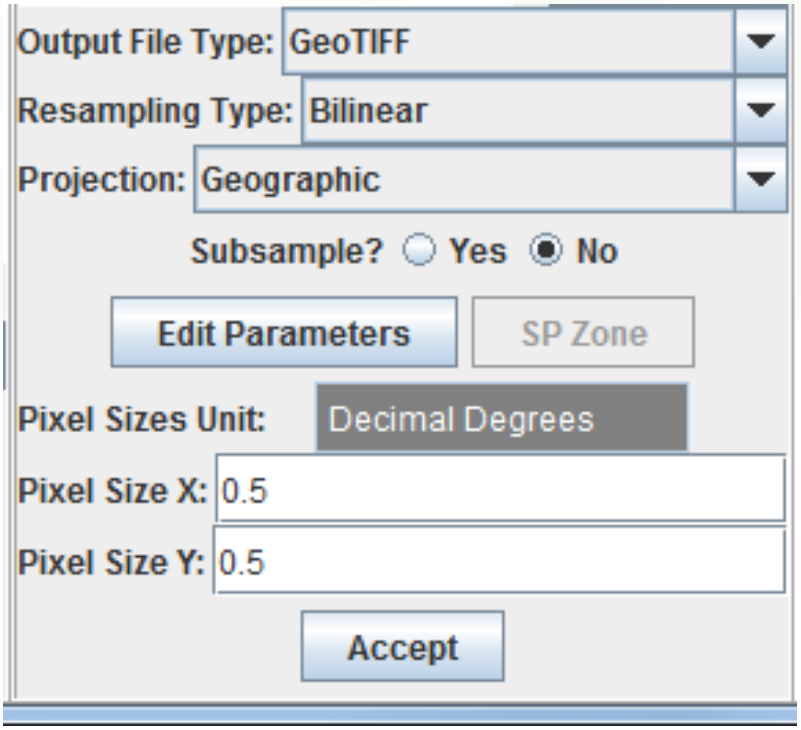

Figure 3: Accepting the conversion parameters

...and then click on the **"Run"** button.

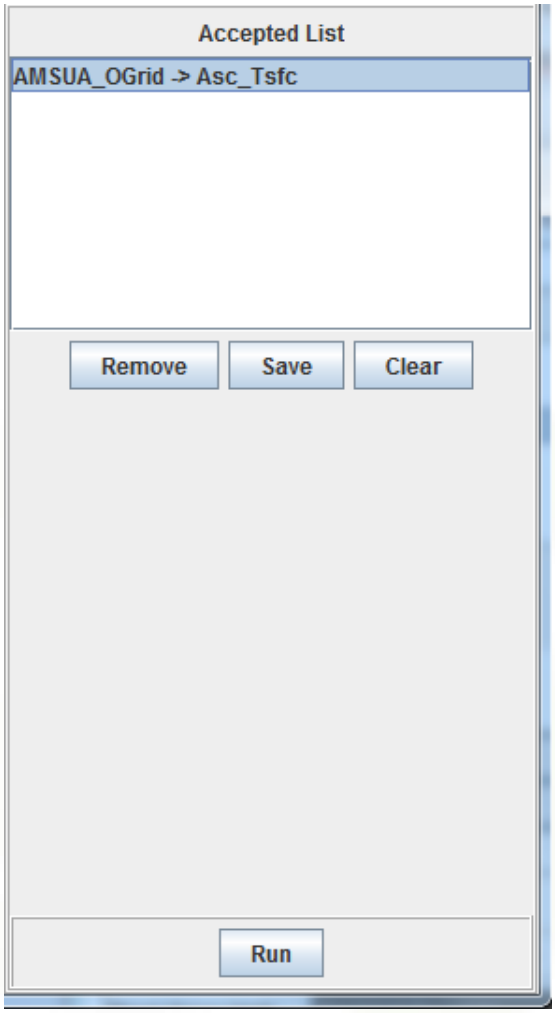

Figure 4: Running the conversion

A new window will show up and say "Job completed...."

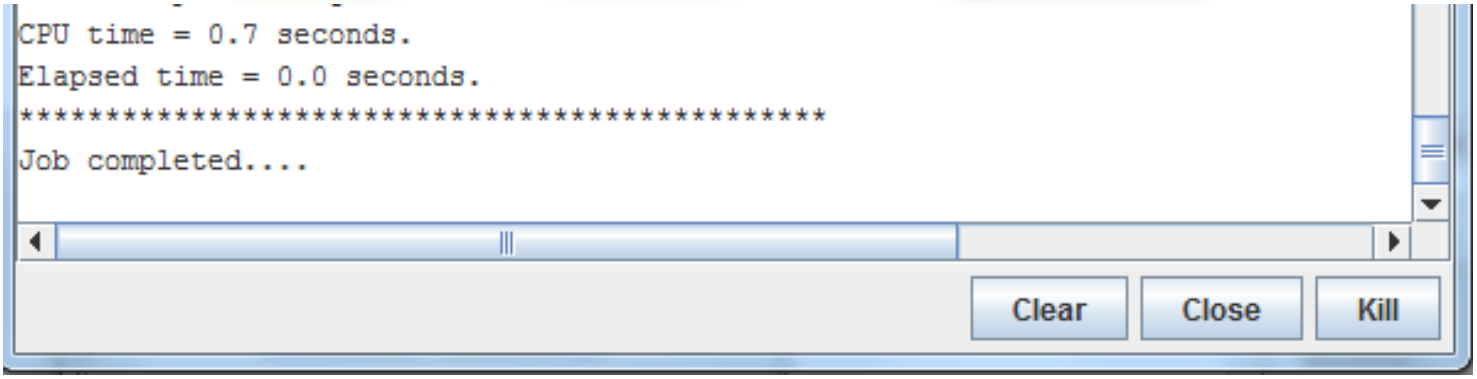

Figure 5: HEG software processing log

Congratulations! You have converted the HDF-EOS file to GeoTIFF!
The newly created GeoTIFF will be called **"PRD.AADM.M2_AMSUA_OGrid.tif"** and will be located at **"C:/VLAB"** (or where you first moved the sample).

11-) Open the GeoTIFF with your favorite GIS (for example, following the ILWIS GeoTIFF tutorial).

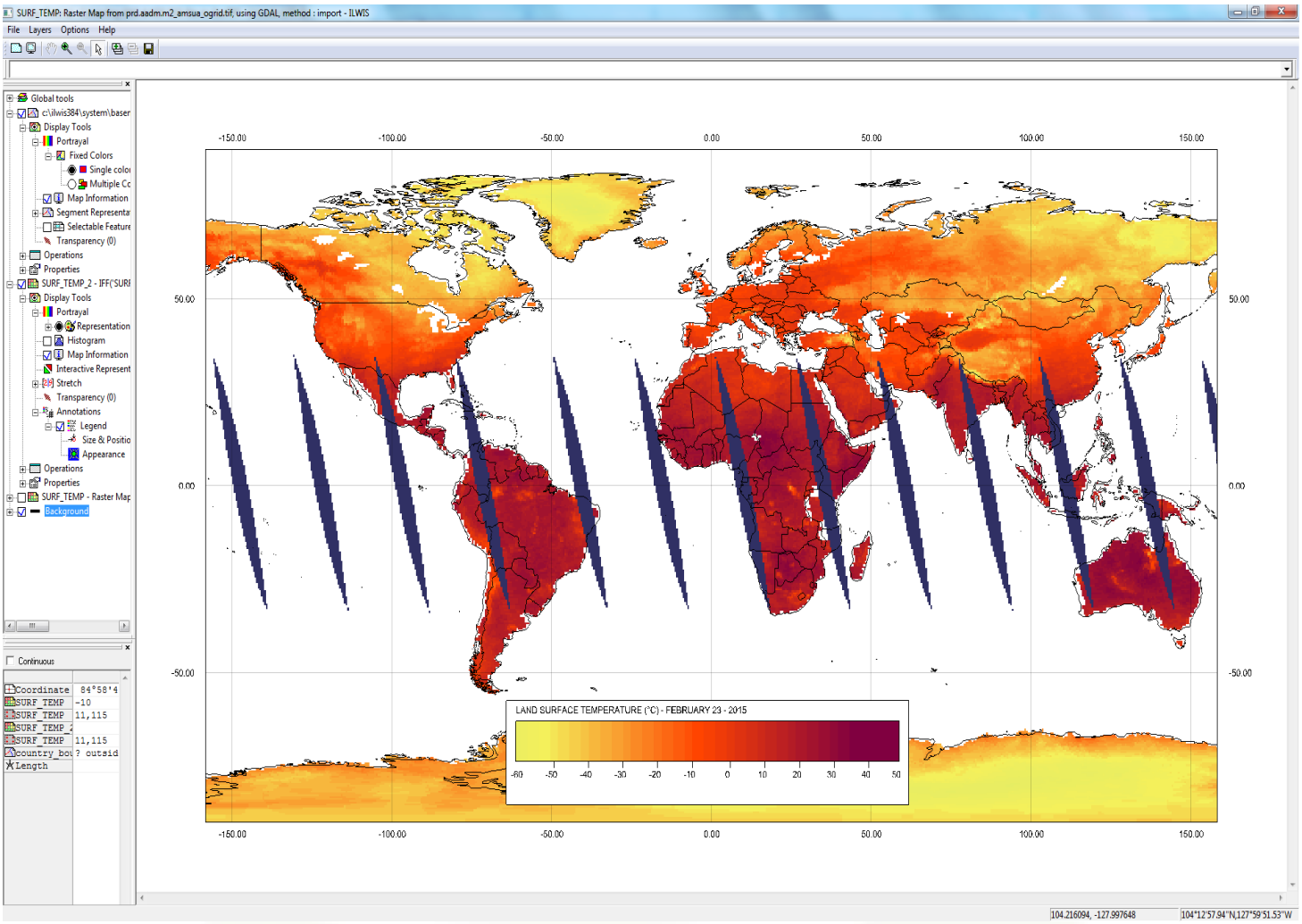

Figure 6: HEG software processing log