SSUSI Data Rendering Project

User Guide

Created by Andrea Cowley under NCA&T REU made possible by NSF grant #AGS1262876.
Under guidance from Dr. William Edmonson and Dr. Anna DeJong

Getting Started

- Requires Java JRE 1.7+ or alternate JRE
- Requires unzipping programcapable of managing .zip files (optional)

1) Install appropriate support software

2) Download the latest release from the GitHub page, or download the full project

3) If your OS allows click-to-run of .jar type files, double click on the Render.jar file.

If this doesn't open the program (usually in a Linux based OS), you may have to run the file from the command line

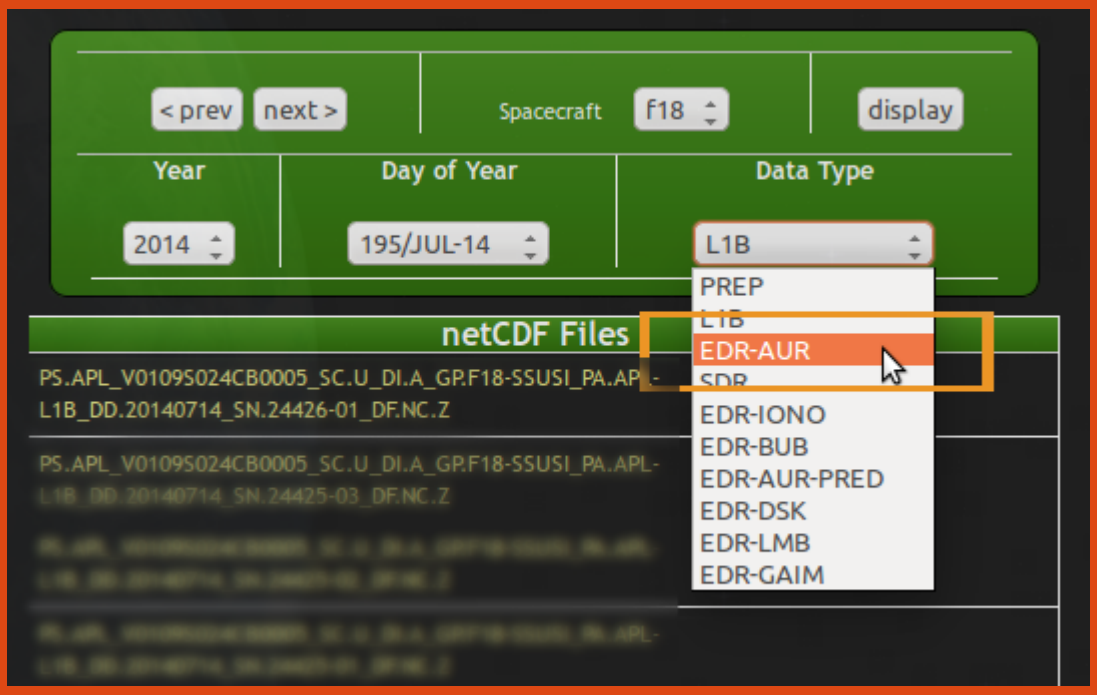
1) Open the command prompt
2) Navigate to the folder containing Render.jar (cd <directory> in most operating systems)
3) Use the “java” command to open the render.jar file (“java render.jar” in most cases)

4) The program should now be running. It can be stopped at any time by pressing the close button supplied by your operating system's window manager (In Widows: the red “X” in the top right; in MacOS and many Linux window managers: the left-most, darkest red button)

SUSSI Data

1) Appropriate data must be downloaded from the SSUSI FTP server, or the data retrieval site

This program is designed to work with the EDR-AUR formatted files (end in .nc), accessible from the drop down box on the data retrieval site

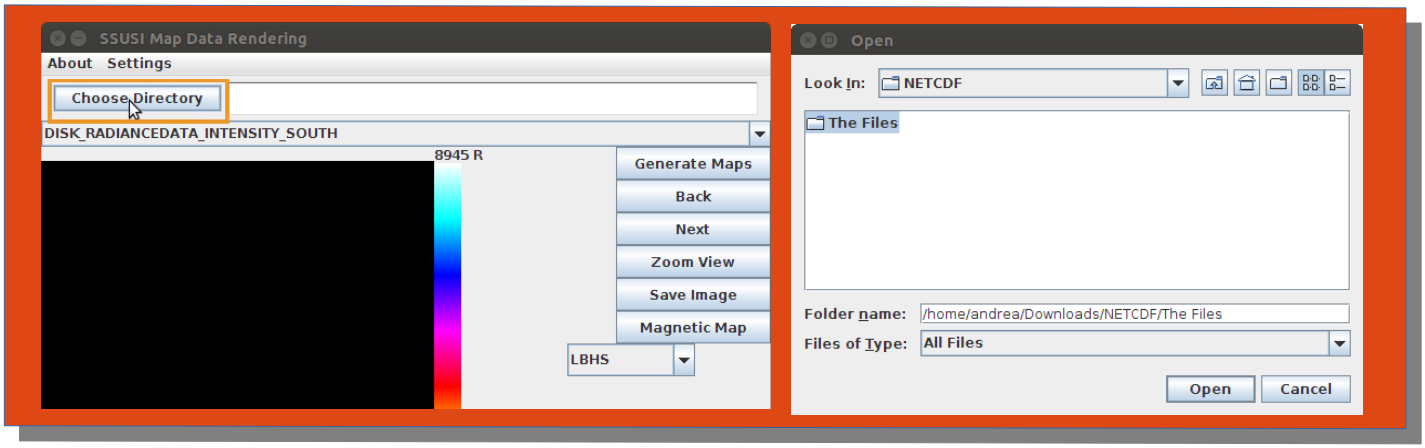


2) Download files for the orbits, times, and satellites of interest

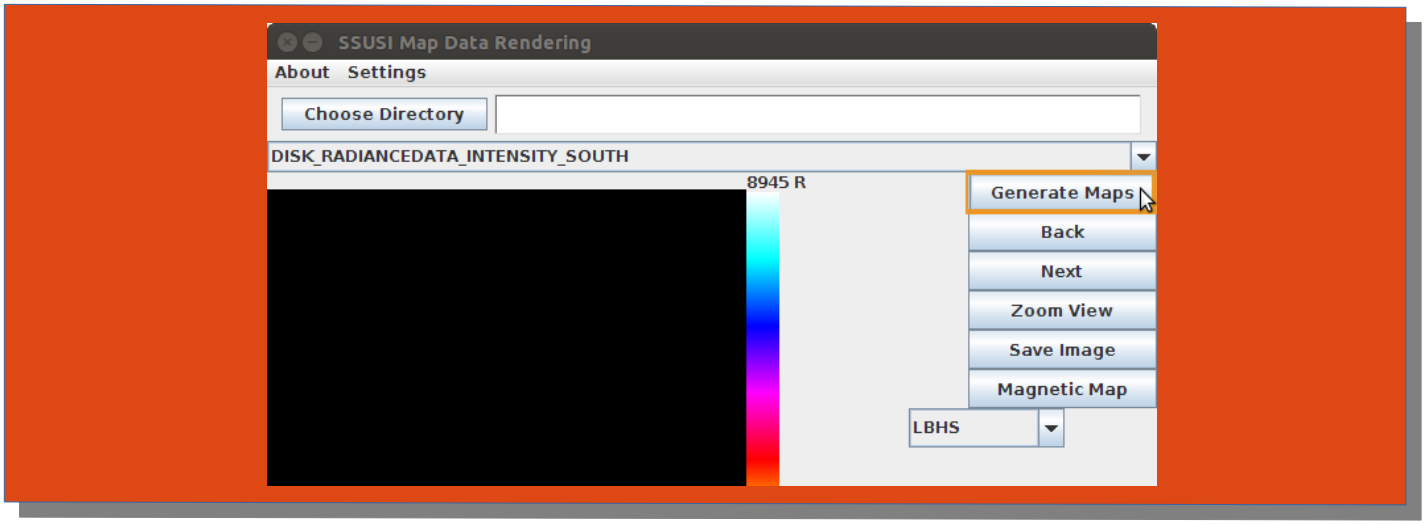
3) Place all files together in a single directory

Rendering

1) Open the program
2) Select the “Choose Directory” button
3) Select the directory that contains the previously downloaded files

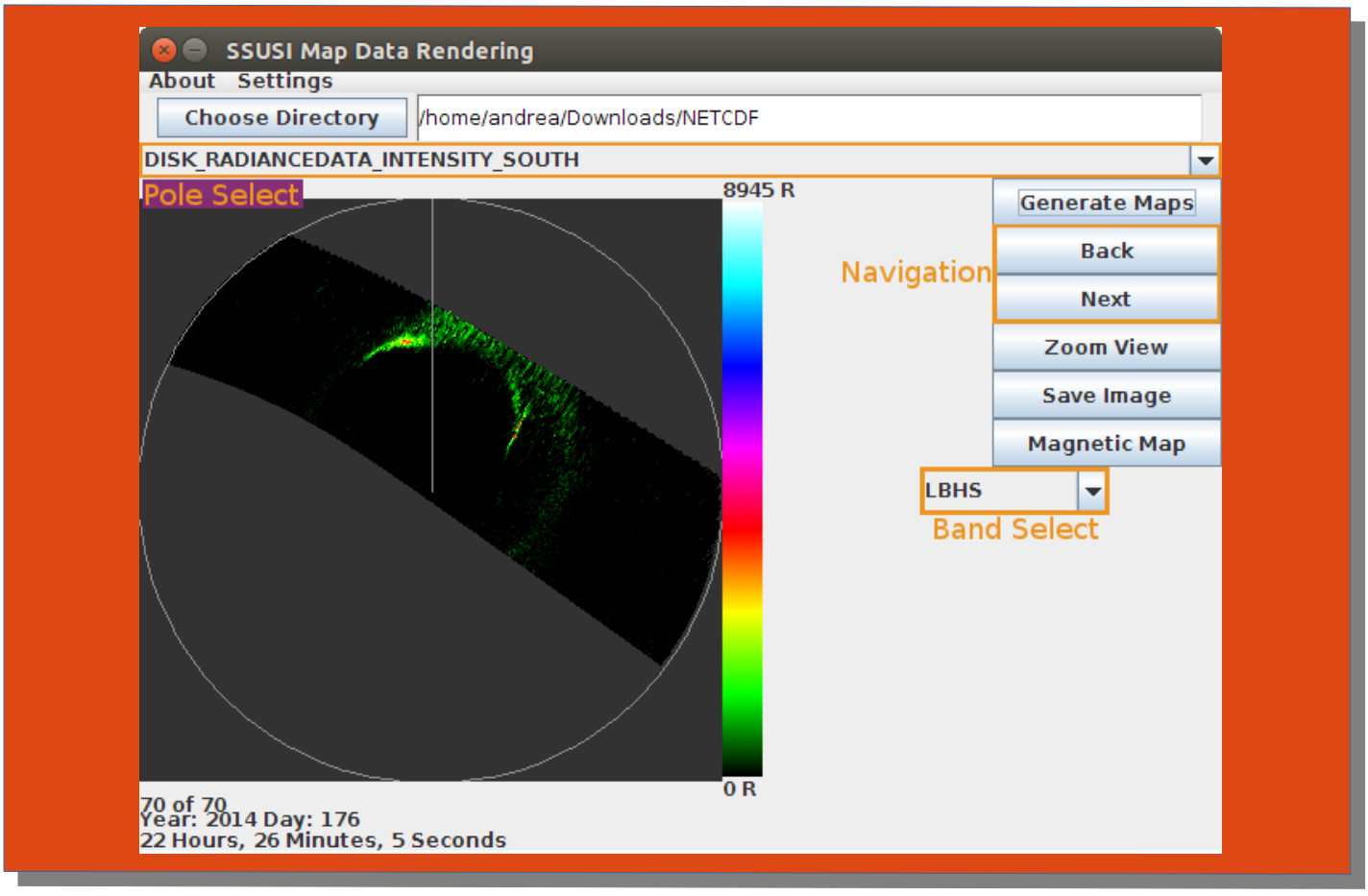


4) Select the “Generate Maps” button



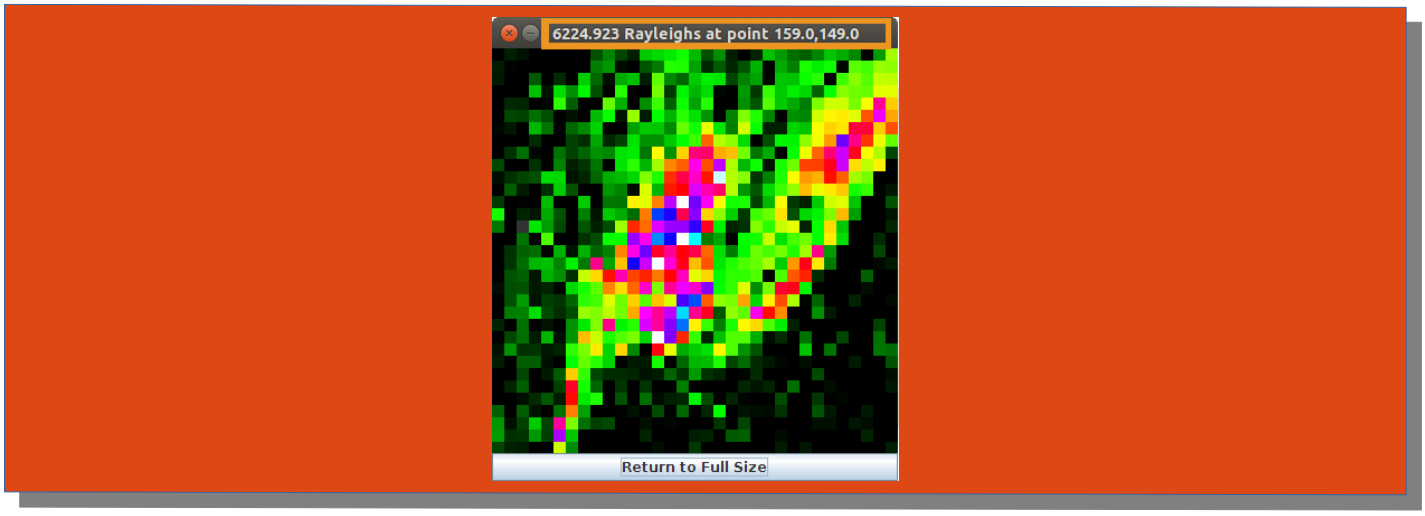
Navigation

- Different files can be navigated using the “Back” and “Next” buttons
  - All files are organized by time, the first file will always be the oldest
- The top drop-down menu is used to select the target pole
- The bottom right drop-down menu is used to select the appropriate band



Information Gathering

- In the main window, the value of any pixel can be called by left-clicking on the pixel of interest
  - The Value appears under the band selection drop-down box
- The zoom view can be accessed by the “Zoom View” button on the main window
  - The zoom view window is a small window that includes a single map and a button to reset the map to its original size
  - Left-clicking on a spot will zoom in on that spot
  - Right-clicking on a spot will return the value of the clicked pixel
    - The value is returned in the title bar of the window



Advanced Controls

- The bucket size for the color conversion can be set using the “Bucket Size” option in the “Settings” menu in the top bar
  - The bucket defines the range of values represented by a single color combination
    - Smaller values offer less scope
    - Larger values offer less fidelity
- The current image in the main window can be saved using the “Save Image” button
  - This opens a dialogue box, simply select the location you would like to save the photo, then enter a file name and press save
  - The image will be in the form of a GIF file
- The “Magnetic Map” button opens a color based representation of the magnetic local time of each pixel.
  - Each color represents 3 hours
  - 0000/2400 MLT time is located at the border of green and gray
  - 1200 MLT is located at the border of blue and purple
  - 1800 MLT is located at the border of black and white