

# SSUSI Data Rendering Project

## User Guide

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Under guidance from Dr. William Edmonson and Dr. Anna DeJong

# Getting Started

- Requires **Java JRE 1.7+** or **alternate JRE**
- Requires **unzipping program** capable 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 Windows: 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**

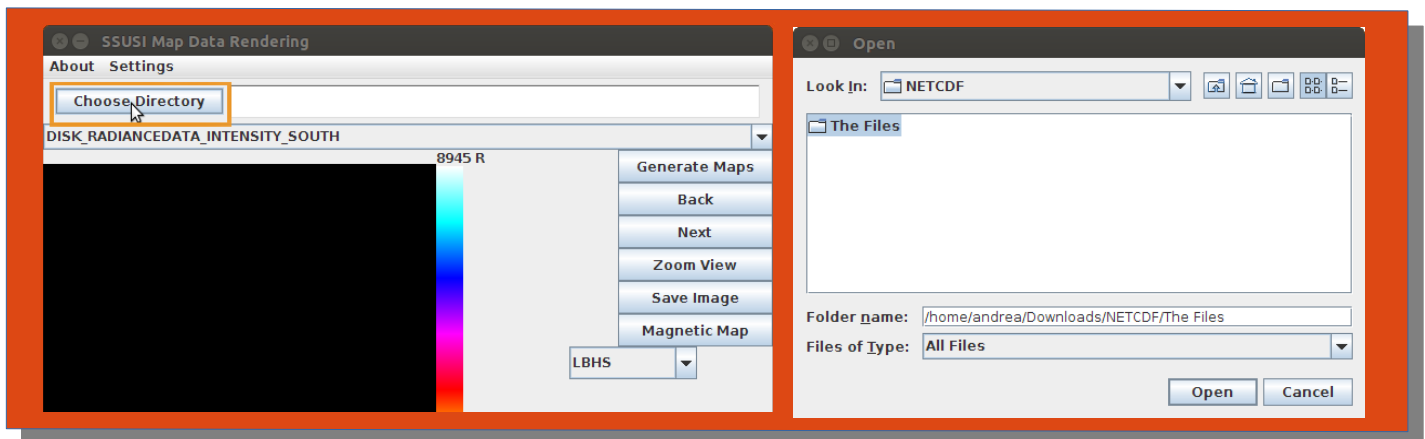
This program is designed to work with the EDR-AUR formatted files (end in .nc), accessible from the drop down box on the data retrieval site

The screenshot shows a web-based data retrieval interface. At the top, there are navigation buttons: "< prev" and "next >". To the right, there is a "Spacecraft" dropdown menu currently set to "f18" and a "display" button. Below these are three main selection areas: "Year" with a dropdown set to "2014", "Day of Year" with a dropdown set to "195/JUL-14", and "Data Type" with a dropdown menu open. The "Data Type" menu lists several options: "PREP", "L1B", "EDR-AUR" (which is highlighted in orange and has a mouse cursor over it), "SDR", "EDR-IONO", "EDR-BUB", "EDR-AUR-PRED", "EDR-DSK", "EDR-LMB", and "EDR-GAIM". Below the selection area is a table titled "netCDF Files" containing several file names, including "PS.APL\_V0109S024CB0005\_SC.U\_DI.A\_GP.F18-SSUSI\_PA.APL-L1B\_DD.20140714\_SN.24426-01\_DF.NC.Z".

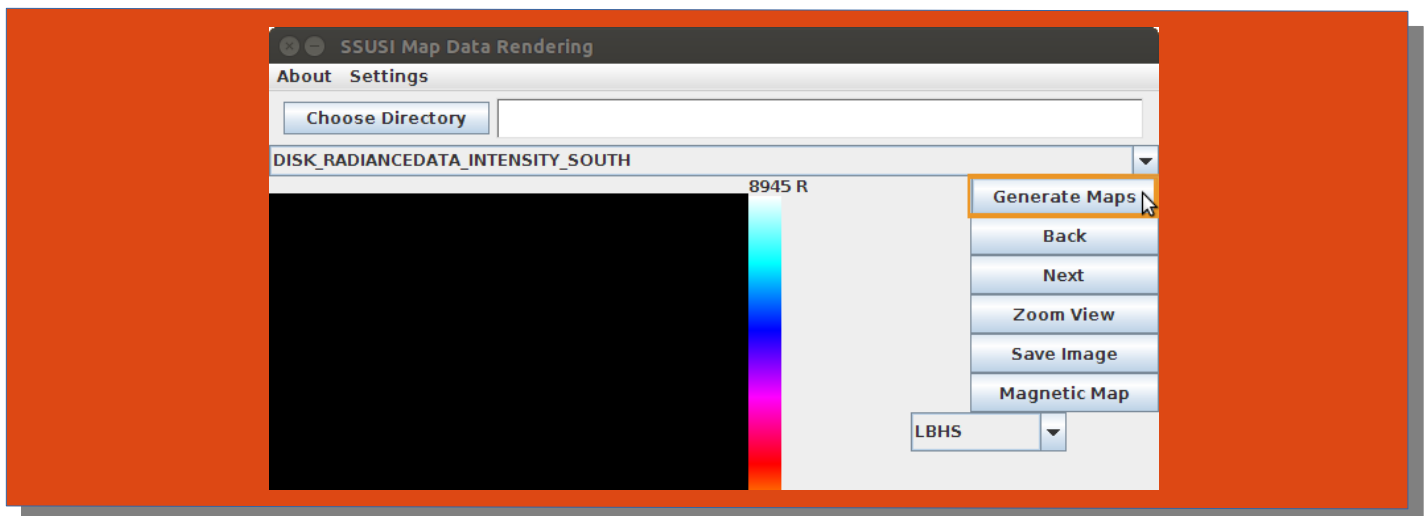
- 2) Download files for the orbits, times, and satellites of interest
- 3) Place all files together in a single directory

# Rendering

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

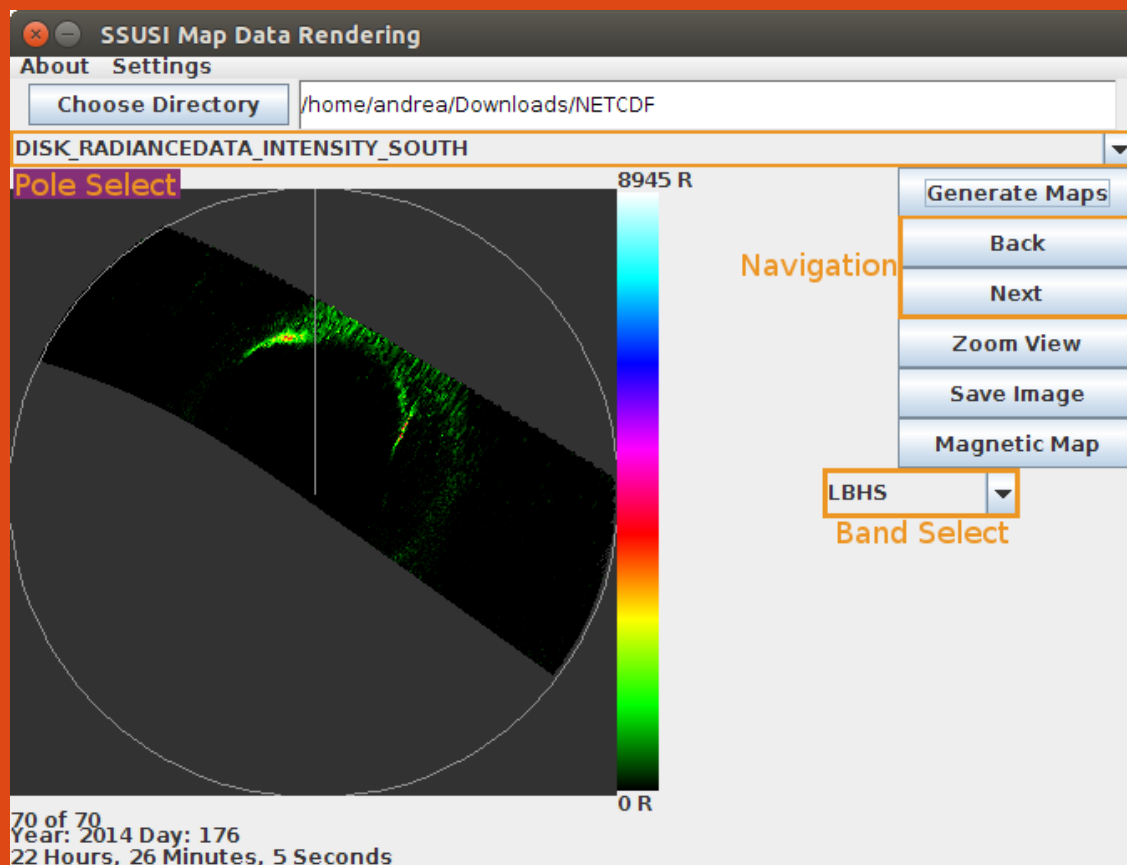


- 4) Select the “Generate Maps” button



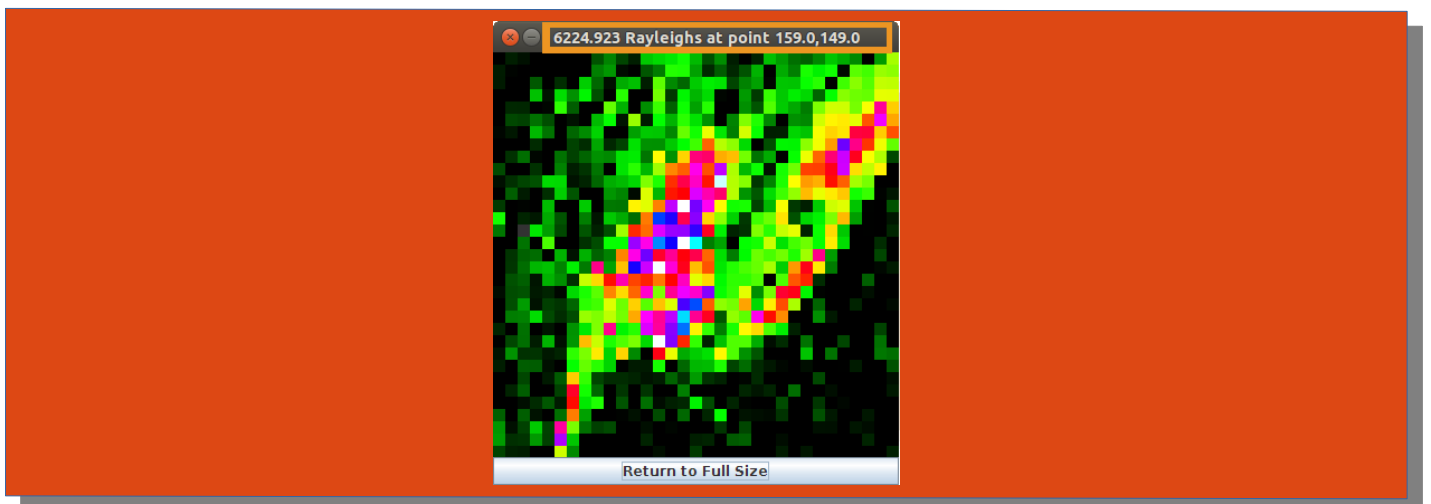
# Navigation

- 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