

S-log Q Website Documentation

Basic Functions-

This program will use a manifest that is created in a python program in order to find images that have been placed in a directory on the terremoto machine. Once the images have been found they are then all loaded into the webpage and then hidden. Finally the very first of the Slog Q maps is shown with all of the other options below.

The Next Button -

The “next” button will hide the current Q map and show the Qmap that is at the next height. Will stop working once the final qmap is reached.

The Previous Button-

The “previous” button will hide the current Q map and show the Qmap that is the next lowest height. This button will stop working when the lowest height is reached.

Height Selection(Solar Radii):

This drop-down menu will take all of the heights of that can be displayed at the current carrington rotation and put them in order in a menu. Choosing one of the heights will change the current qmap to the qmap at the height you have selected.

Map Type Selection:

The map type selection will let you choose between 3 different types of maps, Slog Q maps, synoptic map, and the coronal hole map. It does this by hiding every map but the one that you have chosen on screen.

Carrington Rotation:

The carrington rotation is taken from the header of the original set of data and then passed through a python program. The python program then adds the Car-Rot to a json object which also contains the paths to the images the python program has also loaded. Then, the data is taken from this json object and run through javascript in order to display it on the webpage.

Date:

The date also being taken from the header keywords and then passed into the website using the same method that the Carrington Rotation uses.

Images:

All of the images are created from raw data that is then transformed into images using matplotlib and mpld3. They are then saved as html files so that the mpld3 that they contain may be run in the browser.

Mpld3:

In the bottom left corner of the central box there is a zoom, home, and move feature that mpld3 makes possible. To use the “zoom” select the top left point of where you want to zoom into and then the bottom right point and the picture will zoom in to fill that space. “Home” brings you back to the original image, while “move” moves the image so you can still see the whole image while zoomed in. Scrolling with the mouse wheel will also zoom in and out while you have the move option selected.

The Carrot Submit:

In this bar there needs to be a carrington rotation. Once you have entered a valid Car-rot (One that is currently in the data series you have chosen) then hit the submit button (the enter key will not work) and the new images will be generated using the python program. These new images will then be displayed in the same format as the Carrington rotation you were previously looking at.

The Data Series Submit:

The Data series submit entry field automatically uses the data series: hmi_test.qmap_test as a default (hard coded) but if another valid data series exists then it can be entered as long as the names of the data sets inside the series are in this format → data set[carrington rotation].

Force Reload Checkbox:

If checked this box will force the python program to recreate all of the images in the carrington rotation that the user has chosen. If this is left unchecked the program uses images that have been created in the past to make switching between different Carrington Rotations quicker.