Citizen Science Training Modules

The Radio JOVE Project

radiojove.gsfc.nasa.gov

A Partnership Between

Welcome to The Radio JOVE Project Citizen Science Training Modules. I am Professor Chuck Higgins from Middle Tennessee State University and one of the leaders of The Radio JOVE Project.

Partnerships and Acknowledgements

sunrise.umich.edu

radiojove.gsfc.nasa.gov

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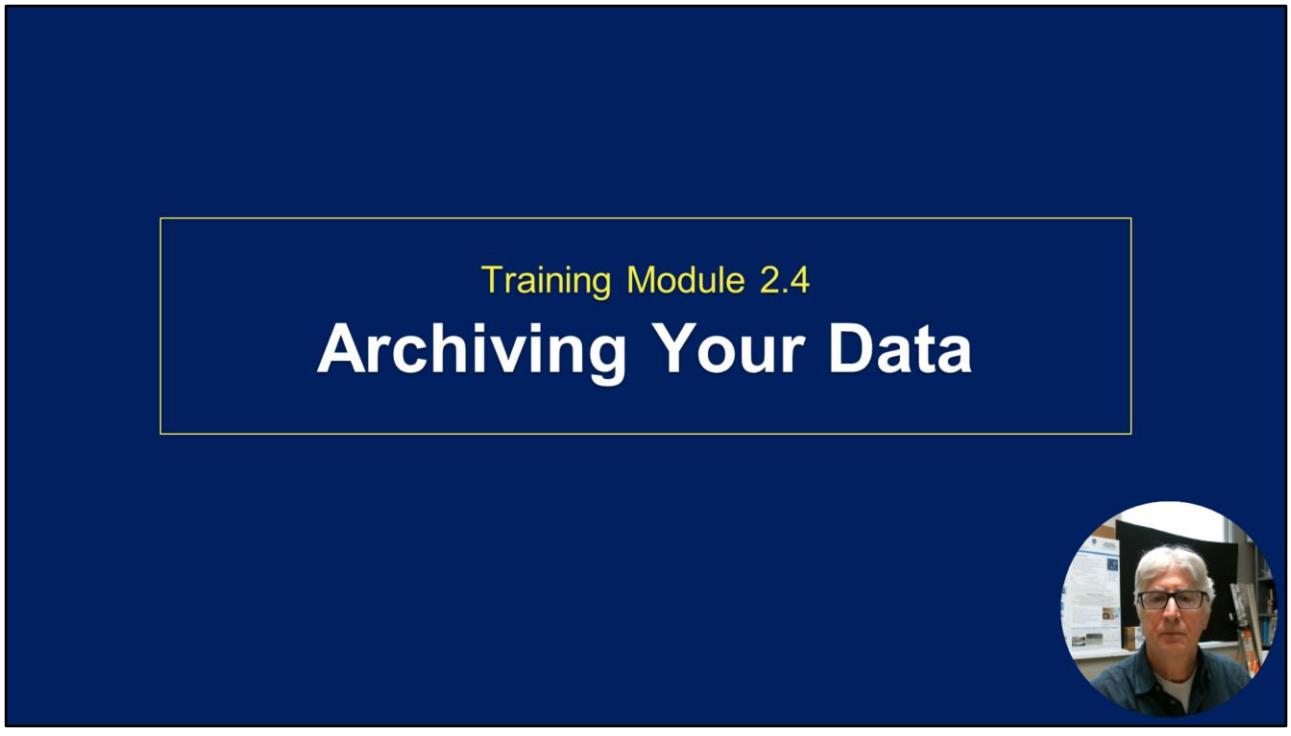
Acknowledgements: SunRISE and SunRISE GRL were sponsored by NASA grant #AWD006989, and hosted at the Climate and Space Sciences and Engineering (CLaSP), University of Michigan College of Engineering, Ann Arbor, MI. Radio JOVE receives funding from NASA Citizen Science Seed funding program (NNH21ZDA001N-CSSFP), Grant# 80NSSC23K0.

These training modules are a partnership between the SunRISE mission team and The Radio JOVE Project. We acknowledge contributors to these modules as well as our funding sources of support.



This is Training Module 2.4 – Archiving your Radio JOVE data

Prerequisites for Training Modules

1. High School Reading Comprehension and General Science
2. Scientific Notation
3. Electromagnetic Spectrum
4. Speed, Wavelength, and Frequency of Waves
5. Graphical Interpretation of Data
6. Training Modules 2.0, 2.1, 2.2, and 2.3

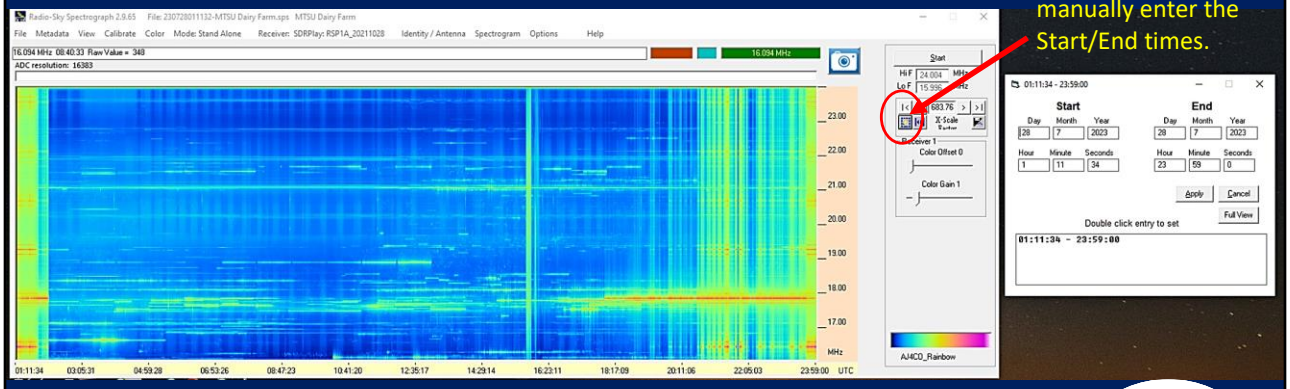
This is a list of prerequisites needed to be able to understand the material in this module.

Learning Objectives

1. Saving a Spectrograph data file
2. Overview the Radio JOVE Data Archive
3. Search the Data Archive
4. Upload data to the Data Archive

This is a list of the learning objectives for this presentation. We first show how to save a part of a Radio-Sky Spectrograph (RSS) data file, give a brief overview of the data archive, show you how to search it, and then guide you through the steps to upload data to the archive.

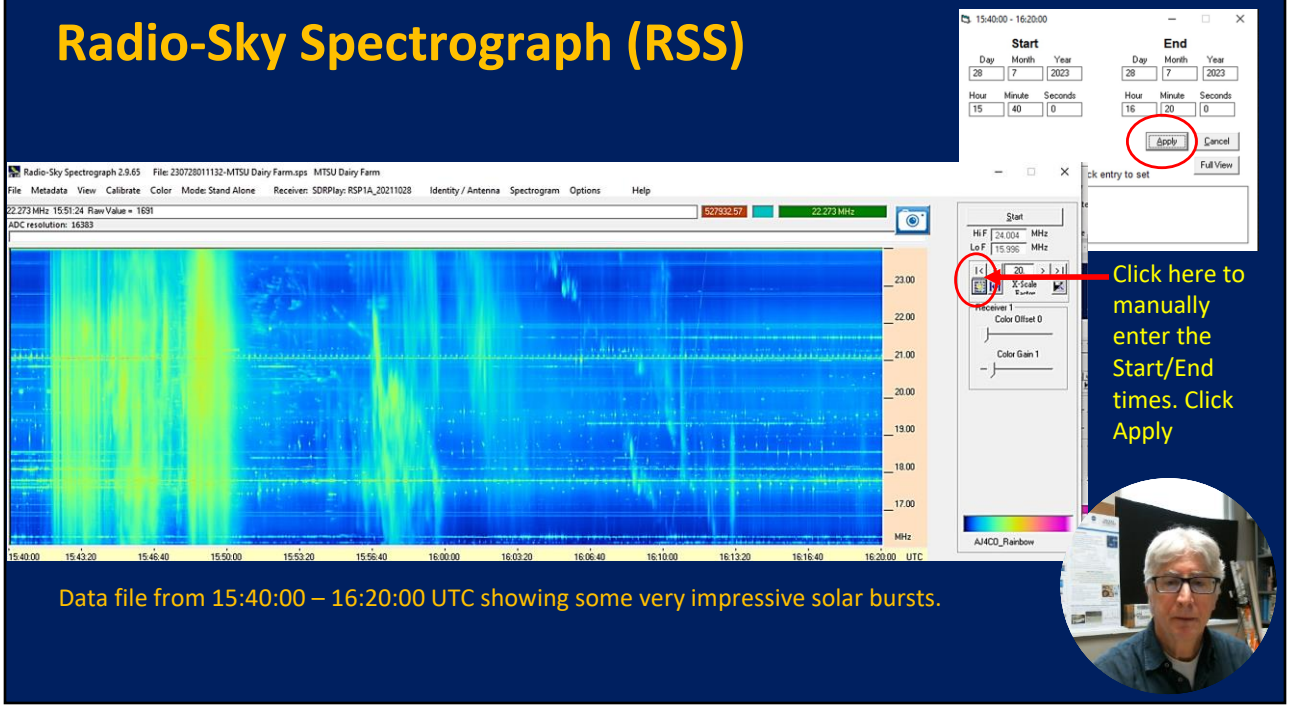
Radio-Sky Spectrograph (RSS)



A near 24-hour data file from July 28, 2023 (C. Higgins, Murfreesboro, TN)
Note: I'm getting a lot of interference at the beginning and end of each day.

This is a Radio-Sky Spectrograph data file, a near 24-hour data file from July 28, 2023 (C. Higgins, Murfreesboro, TN). Note that I'm getting a lot of interference at the beginning and end of each day. Learning from other observers that there was a solar event near 16:00 UT, I want to zoom in on that time. Clicking the "pencil" icon box in the upper right opens the Start/End box so you can manually enter the start/end times.

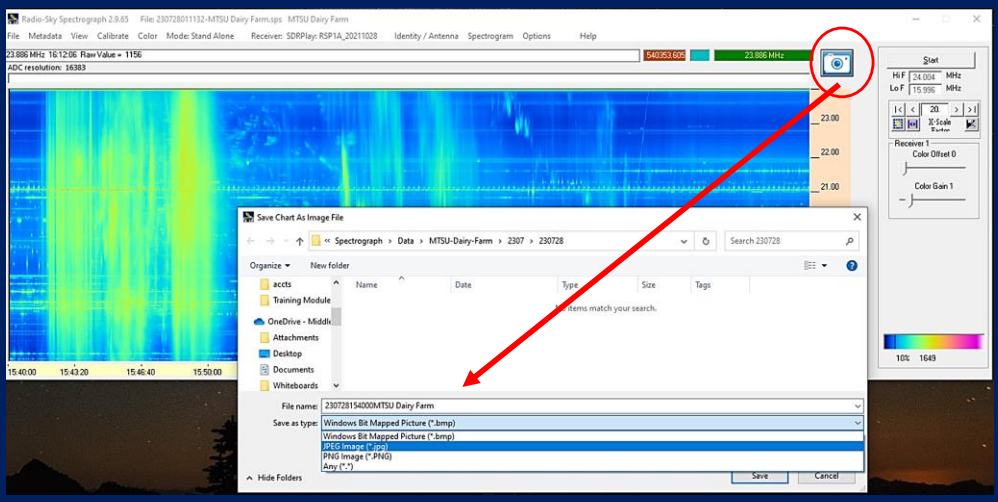
Radio-Sky Spectrograph (RSS)



Data file from 15:40:00 – 16:20:00 UTC showing some very impressive solar bursts.

This is the same data file, but now zoomed into the time from 15:40:00 – 16:20:00 UTC. I manually entered the Start/End times and then clicked Apply. These are some very impressive solar bursts.

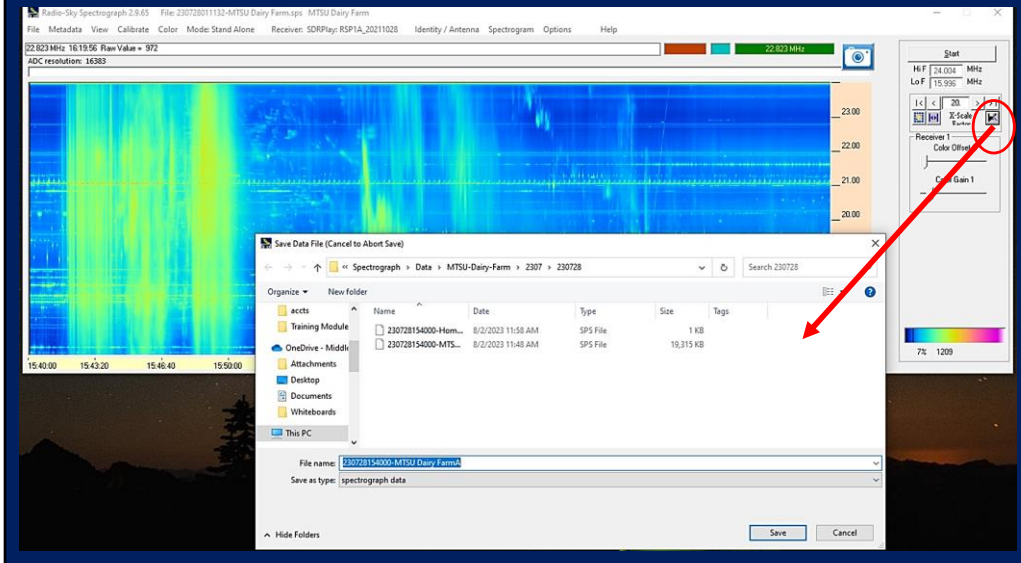
Radio-Sky Spectrograph (RSS)



Click the Camera Icon to Save an image of your data.

Click the Camera Icon to Save an image file of your data. This is basically a screenshot of what you see, and you can save to the image file of your choice. I prefer JPEG files, and this one is only 91 kilobytes. The file saves to the default folder for RSS, in this case the 'YearMonth' folder, 2307, and folder date, 230728.

Radio-Sky Spectrograph (RSS)

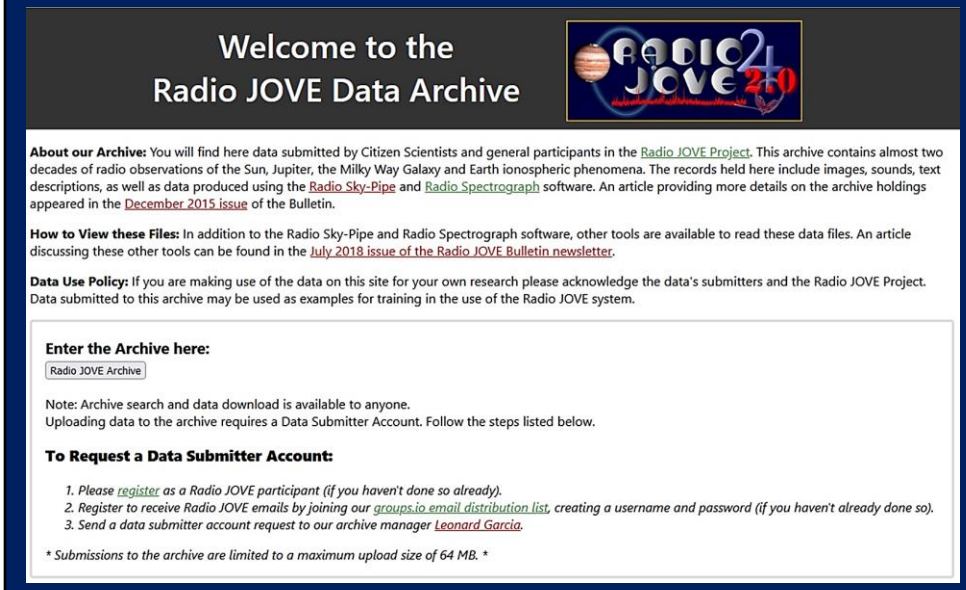


Click the File Icon to Save the visible portion of the spectrogram

Click the File Icon to Save the visible portion of the spectrogram. The Spectrograph folder is the default place to save the file but change this as needed. Notice the filename is “230728154000-MTSU Dairy FarmA” showing the date, 230728, and the start time of the file, 15:40:00, and the observatory name. This 40-minute spectrograph data file with a .sps file extension saved to a file size of 19.3 MB. You can save larger timespans, but I am having some trouble saving files longer than 45-minutes.

Radio JOVE Data Archive

https://radiojove.net/archive.html



he Radio JOVE Data Archive is found on the Radio JOVE website. Anyone can freely search and download data, and our Data Use Policy is such that if you are making use of the data on this site for your own research, please acknowledge the data's submitters name and the Radio JOVE Project.

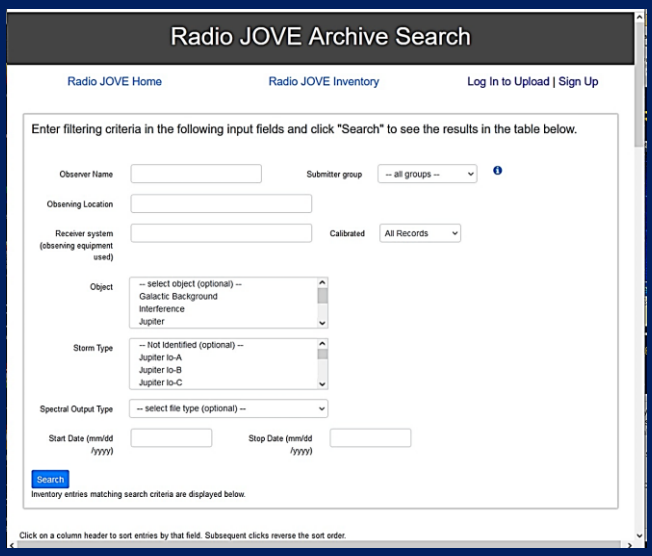
To upload data to the archive requires a Data Submitter Account.

To Request a Data Submitter Account:

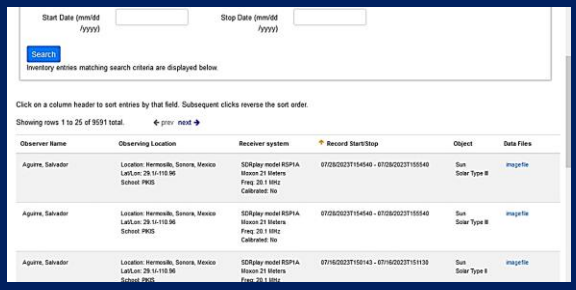
1. Please register as a Radio JOVE participant if you haven't done so already. Register here: https://radiojove.net/sign_up_form.php
2. Register to receive Radio JOVE emails by joining our groups.io email distribution list, creating a username and password (if you haven't already done so).
3. Send a data submitter account request to our archive manager Leonard Garcia: Leonard.N.Garcia@nasa.gov

*Submissions to the archive are limited to a maximum upload size of 64 MB.

Search the Radio JOVE Data Archive

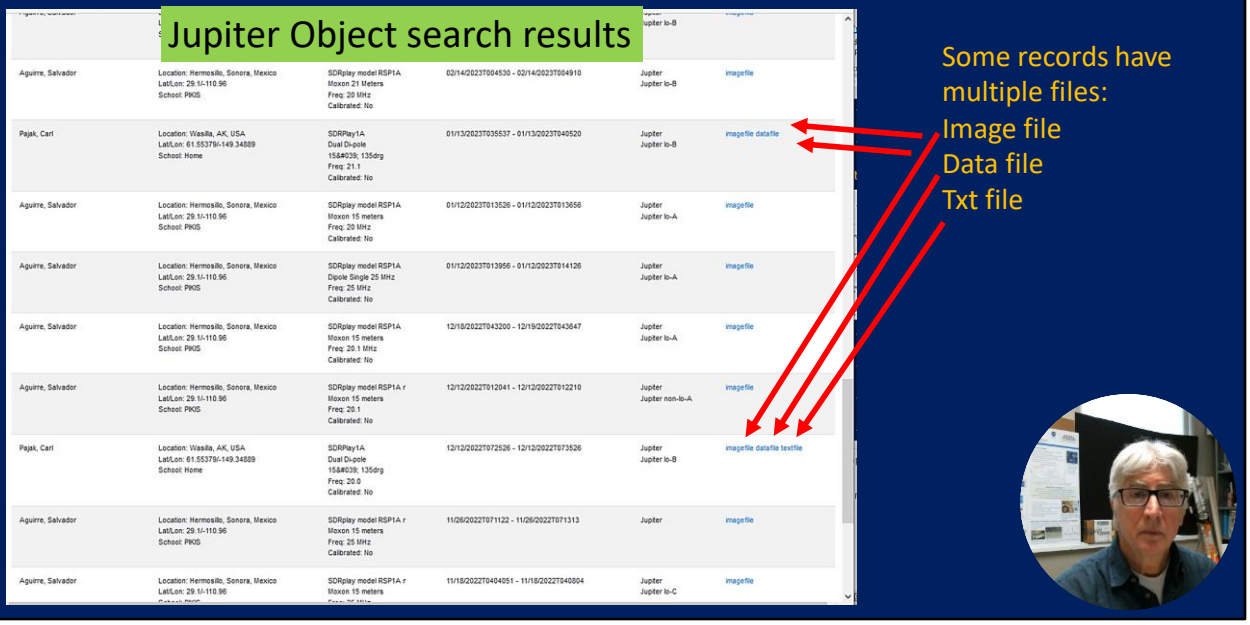


Scroll down to see the latest files.



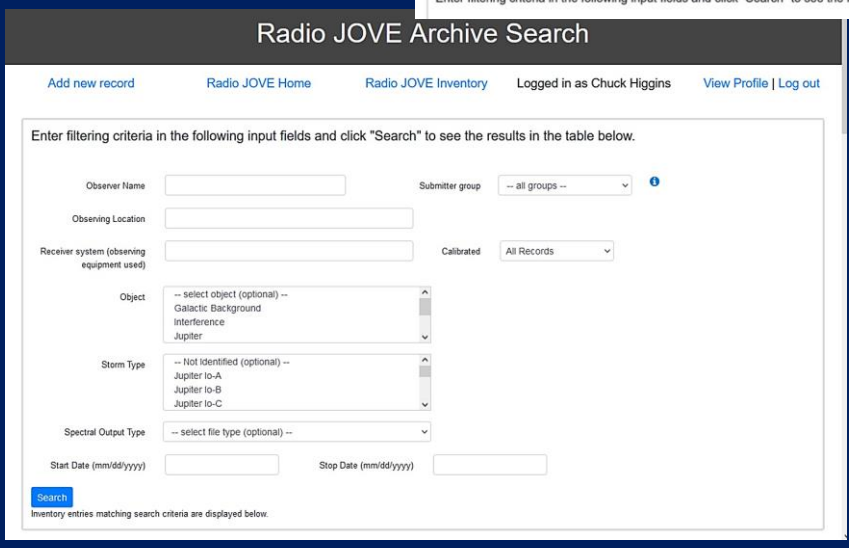
To search the archive, simply enter an observer's name, location, or object, storm type, or output type. You can also use other filters like Submitter Group or Calibrated data. Otherwise, you can simply scroll down to see the latest data records.

Search the Radio JOVE Data Archive



To search the archive, simply enter an observer's name, location, or object, storm type, or output type. For example, to search for only Jupiter events, click the Jupiter Object then the search button, and you will see an output like this. Notice that some records have multiple files, and image of the event, the data file, and/or a text file with important comments or metadata. Click any file to download it.

Uploading Data



Chuck Higgins is logged in.

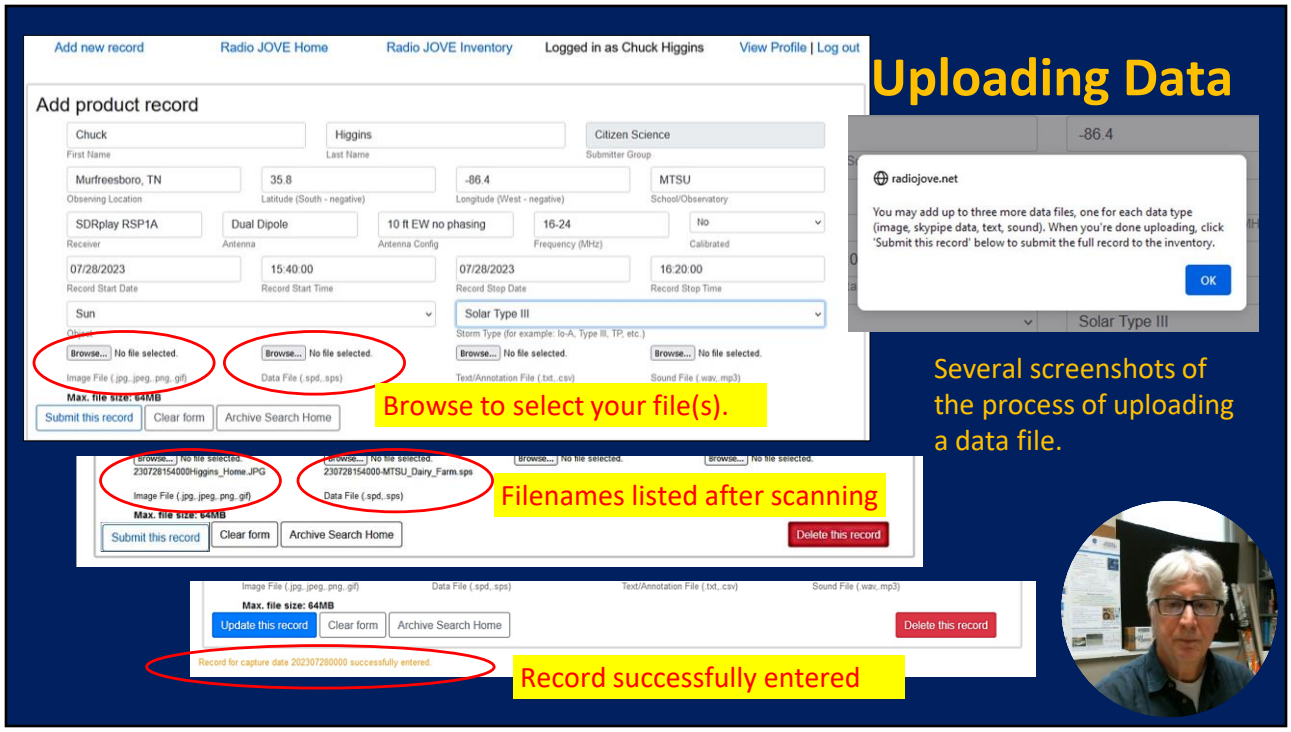
Notice the “Add new record” link in the upper left corner.

Once you have your account and password, you can log in by clicking the “Log in to Upload” button in the upper right corner. After I have logged in, notice the “Add new record” link in the top left corner. Click it to add a new record.

Uploading Data

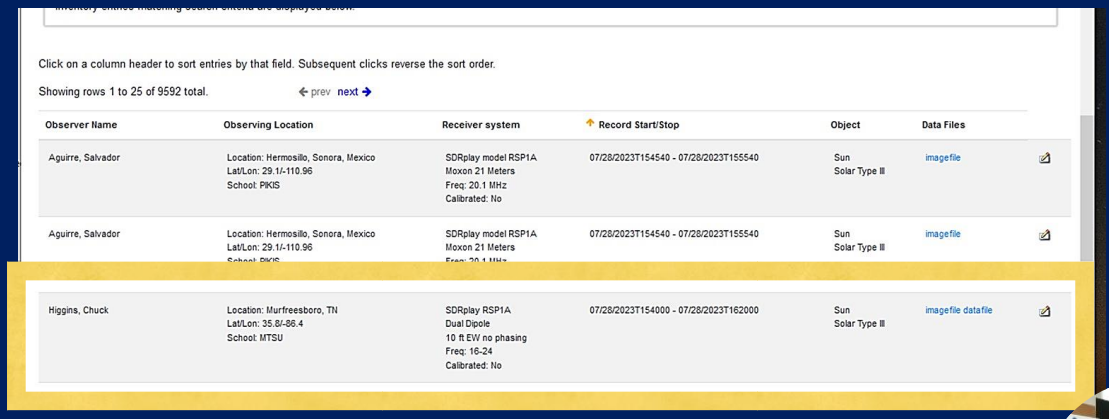
Complete the fields necessary for the new record.

Complete the fields necessary for the new record. Note that not all fields are required. If you do not know, leave it blank, and just put the Object, the Sun in this case. The more information you can enter the better it is for the data archive search capabilities.

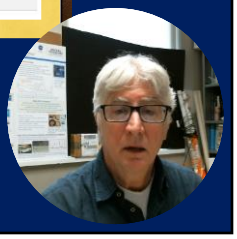


This is the information for this record. Note that not all fields are required, especially the Storm Type. If you do not know, leave it blank, and just put the Object, the Sun in this case. The more information you can enter the better it is for the data archive search capabilities. The maximum file size is 64 MB. *** NOTICE *** the four browse buttons at the bottom of the page. You can enter one or more items before you submit the record. For example, I will add an image file and a data file for this record. After I select the image file it scans the image and then I receive a message that I can add up to three more items. I then add the .sps spectrograph data file. *** NOTICE *** that it will tell you that **the files are accepted,** and the filenames will be seen below the browse button(s). Then click Submit this record. Finally, notice that it tells you that your Record successfully entered.

Uploading Data



New record uploaded



And there it is. The new record is near the top of the list for the most recent uploads. Notice there is an image file and a .sps data file.

Resources

Radio JOVE homepage
https://radiojove.gsfc.nasa.gov/

Radio JOVE Data Archive
https://radiojove.net/archive.html
https://radiojove.net/query/inventory.php

Radio-Sky Spectrograph Software
https://www.radiosky.com/specdownload.html

This is a short list of Radio JOVE resources.

Thanks for watching!

Good luck uploading your data files and thank you for your contributions to Radio JOVE Citizen Science.

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