

# SUNRISE

## GROUND RADIO LAB



Partnership Between





[sunrise.umich.edu](http://sunrise.umich.edu)



[radiojove.gsfc.nasa.gov](http://radiojove.gsfc.nasa.gov)

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## **Training Module 4.2**

# **Guide to Contribute and Participate**

# OVERVIEW

- **Citizen Scientist: What they do?**
- **Citizen Science platforms**
- **Required resources and knowledge**
- **SunRISE Ground Lab Project**
- **Knowledge exchange and helpful links**



# CITIZEN SCIENTIST: WHAT THEY DO!



# CITIZEN SCIENCE PLATFORMS

- <https://science.nasa.gov/citizenscience>



- [https://www.esa.int/Citizen\\_science](https://www.esa.int/Citizen_science)



- Scistarter <https://scistarter.org/>
- Galaxy Zoo <https://www.zooniverse.org/projects/zookeeper/galaxy-zoo/>

Many more..


# SOME EXAMPLES OF NASA CITIZEN SCIENCE PROJECTS

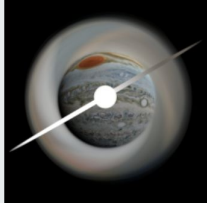
Sungrazer Project 




Cloudspotting on Mars 





Jovian Vortex Hunter 





International  
Astronomical Search... 



Solar Jet Hunter 



Backyard Worlds:  
Planet 9 




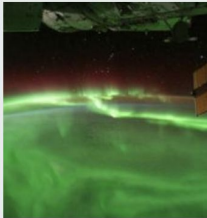
Active Asteroids 





Solar Active Region  
Spotter 





Aurorasaurus 




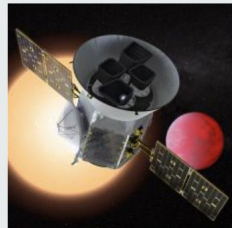
Stardust@Home 



Are we alone in the  
universe? 



Planet Hunters TESS 

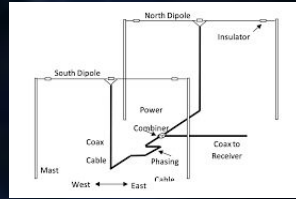


Many more..

# SUNRISE GROUND RADIO LAB PROJECT

## Step-1 Data Collection

Deploying Antenna  
Installation  
Observations



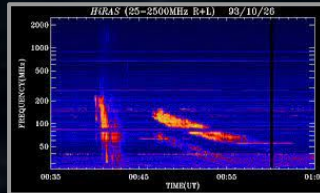
## Step-2 Submission

Collecting data  
Timing  
Archive



## Step-3 Data analysis

Event identification  
Calibration  
Interpretation



## Step-4 Results and impact

Discussion  
Presentation of results  
Publication





# NASA ECLIPSE WEBSITE

--- Good resource for the 2023 and 2024 eclipses

<https://solarsystem.nasa.gov/eclipses/home/>



# Heliophysics Big Year

Global celebration of solar science and the Sun's influence on Earth and the entire solar system.

<https://solarsystem.nasa.gov/solar-system/sun/helio-big-year/>

**Join for**

**October 2023:** Total Annular solar Eclipse

**December 2024:** Closest encounter of Parker solar Probe

## OTHER GREAT RESOURCES AND PLATFORMS

- Globe at Night <https://globeatnight.org/>
- Globe Observer <https://observer.globe.gov/>
- Sungrazer <https://sungrazer.nrl.navy.mil/>

Many more..

Let's move to present your work to the others...

And get Recognised!



Thanks for attention!

