



# HamSCI 2026

DISCOVERING SCIENCE THROUGH AMATEUR RADIO

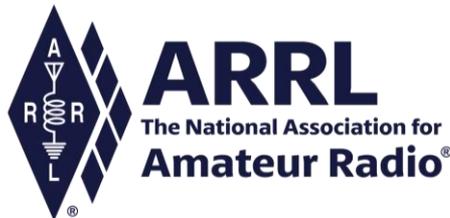
MARCH 14-15, 2026  
HOSTED BY ARRL

CENTRAL CONNECTICUT  
STATE UNIVERSITY  
NEW BRITAIN, CT  
[hamsci.org/hamsci2026](http://hamsci.org/hamsci2026)

*Dedicated to Paul Nicholson G8LMD, VLF Citizen Science Pioneer*

THE UNIVERSITY OF  
**SCRANTON**  
A JESUIT UNIVERSITY

**NJIT**  
New Jersey Institute  
of Technology



AMATEUR RADIO DIGITAL COMMUNICATIONS

HamSCI  
<http://hamsci.org>

[nathaniel.frissell@scranton.edu](mailto:nathaniel.frissell@scranton.edu)

# What is Amateur (Ham) Radio?

- **Hobby for Radio Enthusiasts**
  - Communicators
  - Builders
  - Experimenters
- **Wide-reaching Demographic**
  - All ages & walks of life
  - Over 760,000 US hams; ~3 million Worldwide
- **Licensed by the Federal Government**
  - Basic RF Electrical Engineering Knowledge
  - Encourages pathways to learning, education, and careers.
  - Licensing ensures a basic interest and knowledge level from each participant
  - Each ham has a government-issued “call sign”



University of Scranton  
Students KC3UAW and  
KD2UHN with W2NAF  
at W3USR

ARDC-Funded W3USR  
HF Antennas



KD2ZHK @ the  
ARDC-Funded  
W3USR Scranton  
Station

# Examples of Ham Radio Communications

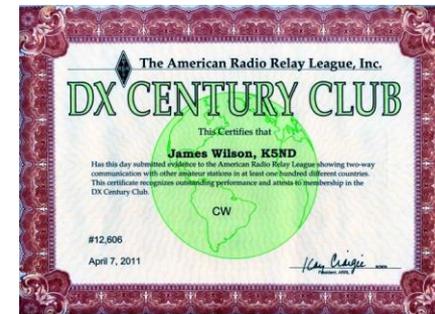
- Emergency & Public Service



- Contesting / Radio Sport

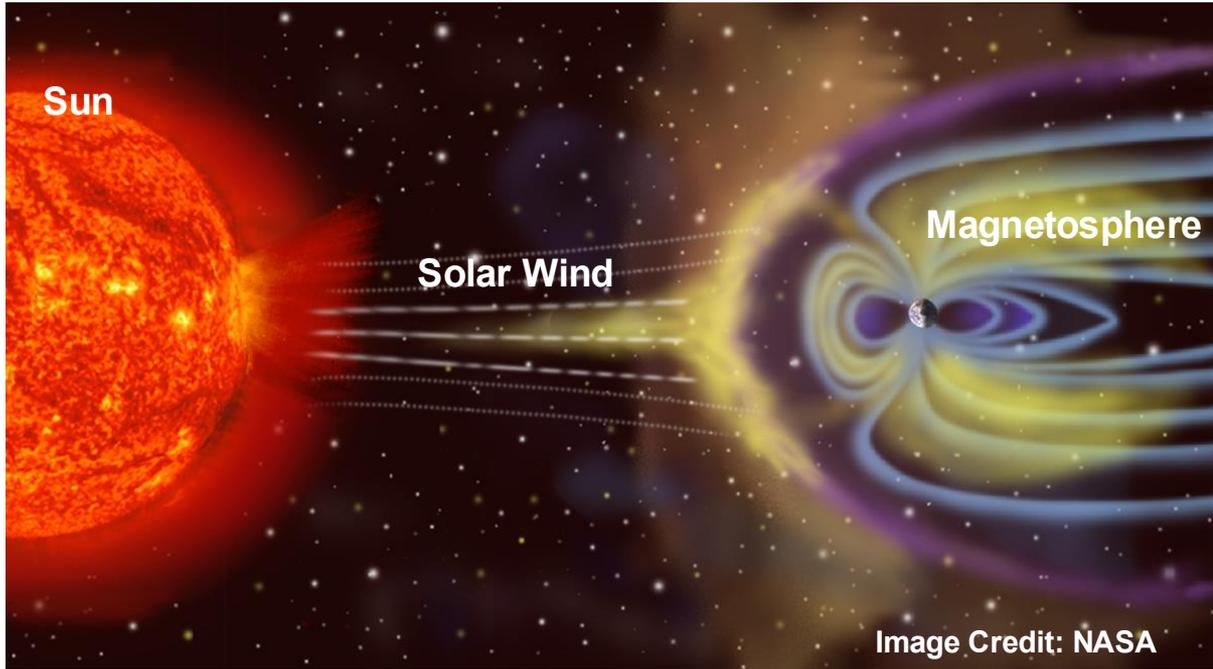


- DXing / Distance Awards

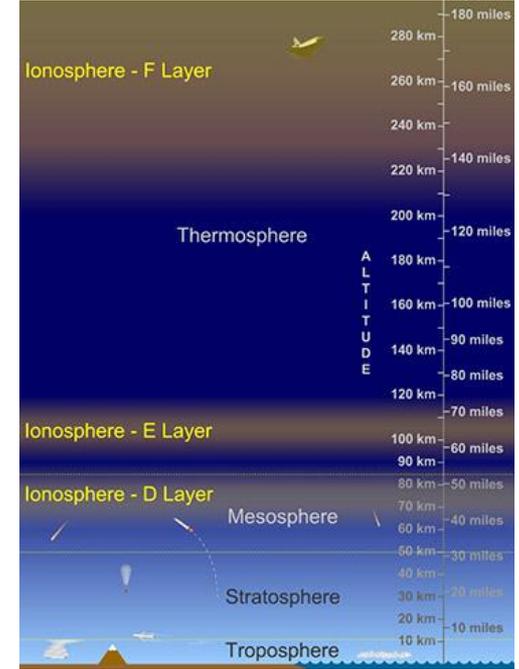


# What is Space Weather & Space Science?

## Geospace System

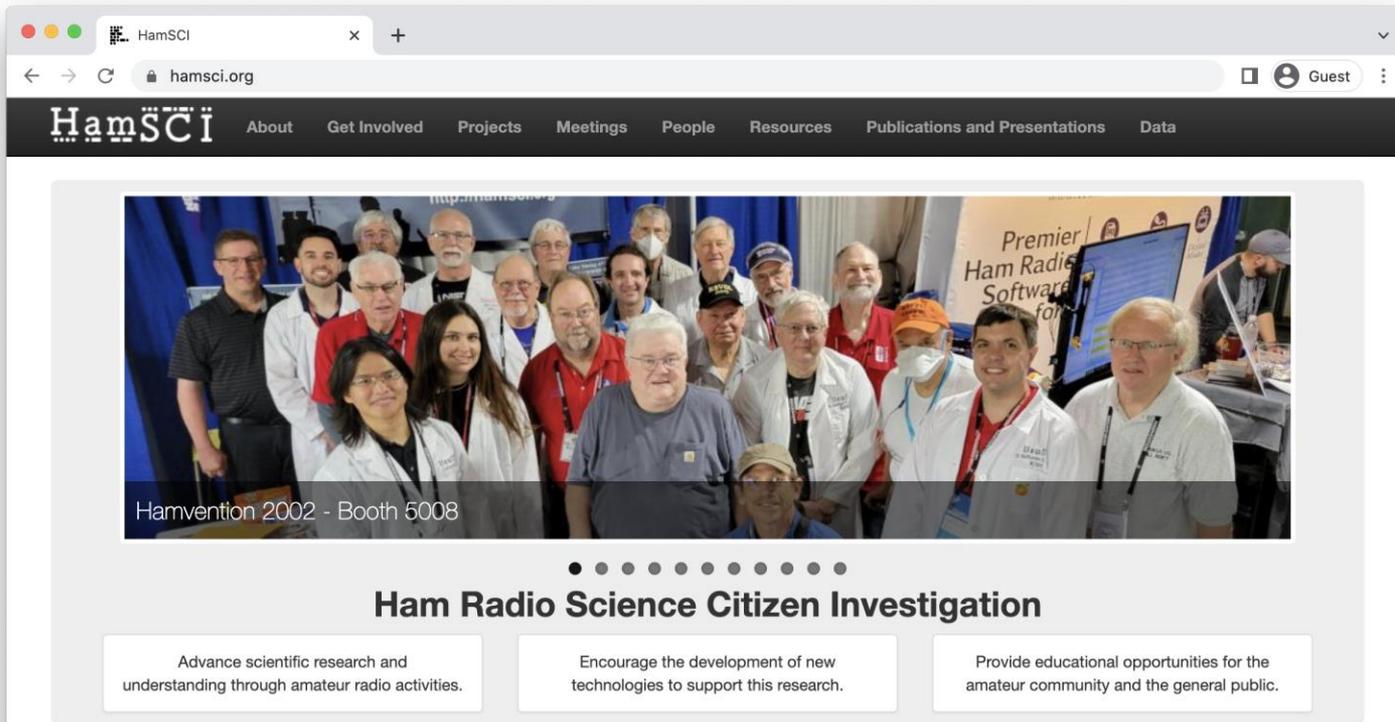


## Atmosphere



Credit: Randy Russell, UCAR  
<https://scied.ucar.edu/ionosphere>

# HamSci Ham radio Science Citizen Investigation



The screenshot shows a web browser window with the URL [hamsci.org](http://hamsci.org). The navigation menu includes: About, Get Involved, Projects, Meetings, People, Resources, Publications and Presentations, and Data. The main content area features a large group photo of people at a booth, with the caption "Hamvention 2002 - Booth 5008". Below the photo is a row of 12 dots, with the 10th dot from the left filled, indicating the current page. The title "Ham Radio Science Citizen Investigation" is centered below the dots. Three white boxes with black text describe the organization's goals:

- Advance scientific research and understanding through amateur radio activities.
- Encourage the development of new technologies to support this research.
- Provide educational opportunities for the amateur community and the general public.



# This Year, We're Hybrid!

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- All talks are streamed over Zoom large meeting.
- If you have a question, put it in the chat, and the Zoom moderators can ask the question for you.
- You may also have a chance to ask the question using your own microphone.

# What is on Zoom?

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- All Oral Sessions on Saturday and Sunday
- *Poster session and and banquet are in-person only. You can see posters online once they are posted after the workshop.*

# Agenda

<https://hamsci.org/hamsci2026>

The screenshot shows the HamSCI 2026 website. The header includes the HamSCI logo and a navigation menu with links for About, Get Involved, Projects, Meetings, People, Resources, Publications and Presentations, Data, and Search. The main content area features a large black banner with the text "HamSCI 2026" and "DISCOVERING SCIENCE THROUGH AMATEUR RADIO". Below the banner, the event dates "MARCH 14-15, 2026" and host "HOSTED BY ARRL" are listed, along with the location "CENTRAL CONNECTICUT STATE UNIVERSITY, NEW BRITAIN, CT" and the website "hamsci.org/hamsci2026". Two blue buttons are visible: "Workshop Agenda" and "Workshop Zoom Registration". Two red arrows point towards the "Workshop Agenda" button from the left and right sides.

# HamSCI Workshop Invited Speakers

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**Dr. Kuldeep Pandey**

*HamSCI - NJIT  
Post-Doctoral  
Research Associate*



**Dr. Rob Suggs**  
NN4NT

*NASA Space Environments  
Team Lead  
(Retired)*

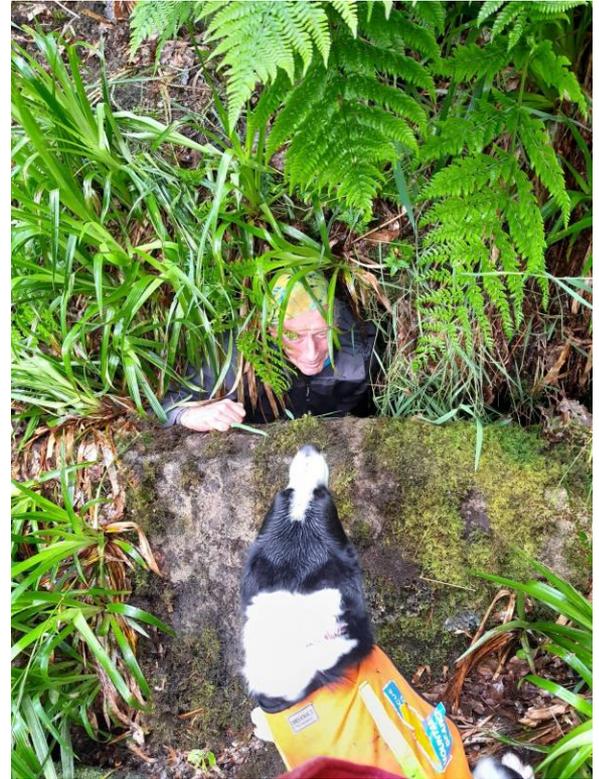


**Dr. Marc Kuchner**

*Astrophysicist and the  
Citizen Science Officer for  
NASA's Science Mission Directorate*

# 2026 HamSCI Workshop Dedication to Paul Nicholson

- The 2026 HamSCI Workshop is dedicated to the honor and memory of Paul Nicholson G8LMD [SK].
- Developed the first VLF reception techniques for amateurs and citizen scientists.
- Author of vlfrx-tools.
- Developed the first VLF amateur transmission mode in the 8270 Hz and 5170 Hz bands.
- Built the Indian Lightning Detection Network (ILDN) , India's first domestic lightning location network that saves thousands of lives.
- We must continue Paul's work!



# Data Sharing Agreement with Tripura University

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- The University of Scranton and Tripura University have entered a collaborative data sharing agreement.
- The ILDN and HamSCI PSWS Network have a common philosophy of open hardware, open software, and societal application through public involvement.
- VLF receivers of both networks will contribute both lightning and space weather data with the intention of growing into a global lightning location network.

# Video Recording

- Meeting is being recorded and edited collaboratively by Jason Johnston KC5HWB of [Ham Radio 2.0](#) and the ARRL Videographer Greg Sulla KC1YNI.



# Special Announcements

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- **Posters should be up throughout the entire workshop... please enjoy and discuss them whenever you can!**
- **ARRL and W1AW tours will be held on Saturday, from 2 to 5 PM. The buses leave promptly for ARRL Headquarters at 1:45 PM. Those driving their own cars are encouraged to carpool.**
- **Late night W1AW operating hours have been arranged - so join us after the banquet on Saturday night (after 8:30 PM).**

# Welcome from the ARRL

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**ARRL** The National Association for  
**Amateur Radio®**

**David Minster, NA2AA, CEO**

# Questions?

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