

# Roadmap for the HamSCI Personal Space Weather Station Network

Kristina Collins KD8OXT

Space Science Institute

“Eh! Je suis leur chef, il fallait bien les suivre.”

“There go the people! I must find out where they are going so that I may lead them.”

Apocryphal, attributed to French revolutionary leader  
Alexandre Auguste Ledru-Rollin

## Abstract

The Personal Space Weather Station Network is a patchwork of evolved and community-driven systems. To develop an overarching strategy for the development of the PSWS first requires an inventory of the network's current state, co-created with the HamSCI community. To that end, 2025 saw the commencement of the PSWS Design Charette, which collected feedback on desired features. The work of the PSWS is constructed in four key areas managed by overlapping teams: **Community**, **Science**, **Data** and **Engineering**. This poster reviews the mission, accomplishments and goals of each team. **HamSCI workshop attendees are invited to contribute notes and feedback to this living document.**

## Would You Like to Know More?

PSWS Charette: <https://www.hamsci.org/charette>

HamSCI Newsletters: [www.hamsci.org/newsletter](http://www.hamsci.org/newsletter)

PSWS Science Traceability Matrix: [www.hamsci.org/stm](http://www.hamsci.org/stm)

PSWS Data: <https://pswsnetwork.eng.ua.edu/>

PSWS Documentation: [www.hamsci.org/psws](http://www.hamsci.org/psws)

## Funding

This poster is funded by the National Science Foundation through NSF AGS-2432824.

	Community	Science	Data	Engineering
Mission	The HamSCI <b>Community</b> is the foundation of the PSWS network. This team maintains ties with the ham community and ensures that science results are disseminated to the public.	<b>Science</b> conducted with the PSWS must be rigorous and traceable. This team forms the bridge between HamSCI and the academic community.	PSWS <b>Data</b> is hosted on a server at the University of Alabama. The UA team is responsible for maintaining the data server according to good software engineering practice.	The <b>Engineering</b> team designs, documents and maintains PSWS instrumentation.
Key Tasks	<ul style="list-style-type: none"> <li>Moderate the HamSCI email reflector</li> <li>Represent HamSCI at amateur radio events</li> <li>Publish the HamSCI Newsletter on a regular basis <a href="https://doi.org/10.5281/zenodo.15257909">DOI: 10.5281/zenodo.15257909</a></li> <li>Ensure regular contact with PSWS maintainers</li> <li>Welcome new members into the HamSCI community</li> </ul>	<ul style="list-style-type: none"> <li>Improve access and usability of HamSCI data, including integrated visualization and processing pipelines</li> <li>Produce peer-reviewed publications using HamSCI data and report results regularly at conferences</li> <li>Identify new scientific opportunities for the PSWS Network, including new campaigns</li> <li>Obtain funding to sustain and extend the work of the PSWS and related HamSCI initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Develop and manage the PSWS server</li> <li>Develop and document API access for PSWS data</li> </ul>	<ul style="list-style-type: none"> <li>Develop PSWS instruments including the RX888, HamSCI magnetometer, VLF Whistler Catcher and Grape series</li> <li>Write and maintain documentation of PSWS instruments</li> <li>Pursue verification, validation and monitoring of PSWS network</li> </ul>
2025 Achievements	<ul style="list-style-type: none"> <li>Hosted HamSCI telecons, talks and events</li> <li>Newsletter publications</li> <li>PSWS Charette</li> </ul>	<ul style="list-style-type: none"> <li>Heliophysics Big Year special issue in <i>Frontiers of Astronomy</i></li> <li>Reports at CEDAR, AGU, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Progress on numerous database features with UA student team</li> <li>Started database migration to Github</li> </ul>	<ul style="list-style-type: none"> <li>WSPRdaemon development</li> <li>VLF Whistler Catcher development</li> <li>K3LR Deployment</li> </ul>
2026 Goals	<ul style="list-style-type: none"> <li>HamSCI presence at Hamvention, Hamcation, etc.</li> <li>Continue station recruitment</li> <li>Complete migration from server at WWOWWWW</li> </ul>	<ul style="list-style-type: none"> <li>NASA SciAct Proposal</li> <li>Update Python package for PSWS data analysis</li> </ul>	<ul style="list-style-type: none"> <li>Complete development migration to Github</li> <li>HAPI implementation</li> <li>Add open-source contributors</li> </ul>	<ul style="list-style-type: none"> <li>Complete RX888 documentation</li> </ul>
Join:	Thursday 4pm ET	Wednesday 10am ET	Thursday 10am ET	Monday 9pm ET

