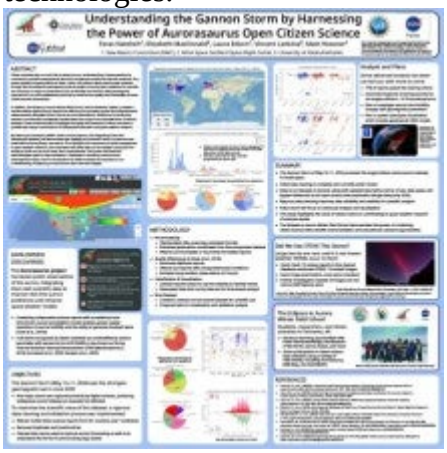
Feras
Natsheh
The New Mexico Consortium (NMC) & Whitman College
Elizabeth MacDonald, NASA Goddard Space Flight Center
Laura Brandt, NASA/NMC
Vincent Ledvina, University of Alaska Fairbanks (UAF)
Poster
Citizen scientists play a crucial role in advancing our understanding of space weather by contributing valuable observational data that complement traditional scientific methods. This poster presents ongoing efforts to clean, verify, and publish citizen science data collected through the Aurorasaurus participatory science project, ensuring their readiness for scientific use. Focusing on major auroral events such as the May and October 2024 geomagnetic superstorms, our work establishes protocols to enhance the quality and accessibility of these crowd-sourced observations.

In addition, the Eclipse to Aurora Winter Field School, held in Fairbanks, Alaska, provided a transformative opportunity to expand this effort by incorporating optical and magnetometer measurements alongside citizen science auroral observations. Students and community members contributed scientifically valuable data that support the intercalibration of diverse datasets. These combined efforts highlight the agility and potential of citizen scientists to provide high-impact contributions to heliophysics education and space weather research.

By cleaning and analyzing 6000+ citizen science reports, and integrating them with heliophysics datasets, we demonstrate the reliability and scientific value of crowd-sourced observations during large, rare events. This highlights the importance of public engagement in space weather research, and showcases how these data can be utilized to study auroral activity at scale and at much lower than usual latitudes. This poster will detail the methodologies used for data verification, challenges in handling crowd-sourced heterogeneous data, and the contributions of citizen scientists and students to our understanding of exploring unusual aurora with new technologies.


Poster PDF
Natsheh-Feras.pdf
Meeting homepage
Space Weather Workshop 2025
Download to PDF