2026 Workshop: CEDAR Maker's Club

Long title
CEDAR Maker's Club - Exchanging designs, code, operating procedures, and hacks useful for CEDAR experimental science
Conveners
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Description

This will be a follow-on from the highly successful “CEDAR Maker’s Club” workshop that was held during 2024 CEDAR meeting in San Diego. It will be devoted to exchanging ideas for in-house designs/builds/hacks of CEDAR-relevant equipment and technology – instruments or instrument components, optical designs, circuit designs, micro-controllers, antenna designs, 3D printable parts, analysis codes, cloud sensors, etc. Student designs and student builds are especially encouraged. We anticipate presentations that showcase technology developed by CEDAR experimenters, and that may be useful to others in the community. Where appropriate, presenters could bring along physical examples of devices they've built for a CEDAR application. Presenters would be encouraged to submit their designs and application notes to a shared repository that other CEDAR users can access.

Agenda

Wednesday June 24th 10am-12pm; Room 101, Join Virtually in zoom

- **10:00 AM** – Mark Conde — Introduction
- **10:03 AM** – Aaron Ridley — Student-built payloads for small rocket and balloon platforms
- **10:10 AM** – Liz MacDonald — Aurorasaurus data and DIY activities
- **10:24 AM** – Quetzal Larrick — CubeSat Electrostatic Analyser
- **10:36 AM** – Kristina Lynch — Ground-Based Rocket Tomography Array: *GNEISS Lattice Tomography: Fielding a Scientific Instrument Array Using a Student Team*

- **10:48 AM** – Kylee Branning — ASI: *3D Printed All-Sky Imagers*
- **11:00 AM** – John Meriwether — New FPI Instrument (MaxFPI)
- **11:12 AM** – Nathaniel Frissell — HamSCI Community
- **11:24 AM** – Michael Hauan — HF Receiver System
- **11:36 AM** – Dave Witten — Magnetometer
- **11:48 AM** – Open Discussion / Demos

Justification

CEDAR has a long tradition of observational and experimental science, which this workshop aims to strengthen by fostering collaboration between experimental groups. Modern techniques like 3D printing make it easy to share designs between groups, allowing for higher levels of collaboration and, ultimately, for more science to be done. A second (but equally important) objective is to provide another forum where students can showcase their skills. Students working on observational programs often acquire the type of mixed science and engineering skills that are much sought after in the job market. The CEDAR Maker's Club would be an ideal way for students to learn these skills (by constructing components from existing shared designs) and to advertise their ability to create new solutions.

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