

2023 LROSE AMS Workshop Notes

1st discussion session (Intro, Status Update, HawkEdit)

- Need an X-band parameter file for the improved PID identification; we have the software support, but not so much the research support on this issue.
- Color palettes and edits and saving; make this more intuitive.
- Colorblind friendly color scales added to lrose-displays
- Keep the color scale association with the field in persisted parameter file
- HawkEdit use cases and needs
 - Truck borne radar data X-band, mobile doppler radar data set, NEXRAD data, RHI displays, Linux release
- For stationary XBAND data, polygon boundary editing is really useful! Look into pySolo
- Improving HawkEdit memory issue
 - Use valgrind to profile HawkEdit
 - Turn off compression in Radx; compression is time consuming when writing data and for undo/redo, only really need compression on the final write/save of the data
- Consider Gateway for workflow with preset parameters (no ability to modify parameter files; or maybe modify parameter files via UI widgets/options) for specific data sets; so something with very little variability; more like an interactive demo.

2nd discussion session (SAMURAI, FRACTL, Summary and Future Work)

Community Discussion

- JupyterHub worked pretty well!
- How to remove barriers to using SAMURAI? The JupyterHub interface seems to help!
- What are the gridpoint limits on SAMURAI?
 - 300 x 300, 400 x 400 is the upper grid limit. Less than 30 minutes of airborne radar data. The grid size is more a limit imposed by netCDF output (3-4 GB size of netCDF)
- Demo of LUCID?
 - Not yet, coming soon. JAZZ did work in the field during PRECIP.
- Fix one ray and then compare to 10 rays +/- for Bargen and Brown unfolding in HawkEdit. (from Peter)
- RadxDealias can be used for unfolding, but there is a bug in RadxDealias regarding the sounding data.
- How to grow the community?
 - Timing. When people want to get their hands on field data, then the LROSE tools and community will be large. Documentation is super valuable! How to use the tools is really a great way to increase the community.
- Look into how to integrate PyArt and LROSE tools.
- JupyterHub for classrooms! Cloud computing plus JupyterHub are indispensable

Other features, apps, and tutorials that are missing/needed

- Maybe an advanced tutorial on RadxConvert and all the features of RadxPrint
- CSU Radar Tools tutorial (combining LROSE, PyArt, and CSU Radar tools all together)
- Resources in the cloud
- Data storage (datasets stored on NCAR resources for the JupyterHub tutorials)
- Integrating SAMURAI and FRACTL
- Jupyter examples