Python and the Unidata Community

• The earth science community has embraced python as a general purpose programming language for data analysis and visualization.
• Highlighted in Unidata 2018 proposal
• Surveying and evaluating Scientific Python ecosystem to better understand what contributions would benefit the Unidata community
Python at Unidata

• Focus on existing Unidata technologies
  – netCDF, TDS, ADDE
  – CF conventions for netCDF

• Benefit the Unidata community
  – Training Workshop in 2013 and again in 2014
  – Contributing to general scientific packages

• Participate in scientific python community
  – E.g., attend SciPy conference
netcdf4-python

• Working with developer to maintain, support, and advance python binding for netCDF-C.
• Move source code and documentation into gitHub under the Unidata area
• Plan/desire to advance support for netCDF-4 enhanced data model.
Python and CF Conventions for netCDF

• Existing or planned projects
  – Iris and Cartopy
    • Iris examples gallery (link)
  – pyCDM
  – CF-Python (link)

• Recent conference call with UK MetOffice to discuss possible collaborations
Community Contributions:
Adding Skew-T Capabilities to matplotlib
Python Training Workshops

• 2013 Training Workshop
  – Accessing and Using TDS Data with Python

• 2014 Training Workshop
  – Broaden the focus to Unidata technologies
    • netCDF, TDS, ADDE, etc.
General Python Tools

• IPython Notebook
  – Web interface to Python (example)

• Wakari (link)
  – Cloud hosted instances of IPython Notebook