



98th Annual Meeting
AUSTIN | 7-11 JANUARY 2018

770: The MetPy Roadmap: Replacing Legacy Meteorological Tools

Tuesday, 9 January 2018

03:45 PM - 05:30 PM

Austin Convention Center and Hilton - Exhibit Hall 3 (ACC)

Meteorological data analysis presents many challenges. Data are large and in a variety of text and binary formats; they frequently involve complex multidimensional ungridded observations over time. There are also a large variety of calculation methods, assumptions, and approximations that can be invoked in various analyses. Finally, most data are displayed on maps that can be difficult to generate in a versatile and modern way.

MetPy is a community driven Python package for meteorological data I/O, calculations, and plotting. MetPy began as an ad-hoc project and has become a supported project with contributors from the user community. MetPy's goal is to reduce the computing challenges faced by research meteorologists and educators. In this presentation we will layout the roadmap for MetPy's evolution.

In addition to continuing to add traditional calculations and plots to the MetPy code base, Unidata intends to add a conversational user programming interface to help new users migrate from legacy software such as GEMPAK and lower the activation energy to begin to program in Python. A calculation solver is also planned that will allow users to specify the input values and desired output, while the solver determines any necessary intermediate calculations and performs them silently.

Ultimately the goal of MetPy is to provide a standard set of well-documented calculations and plotting utilities for the meteorological research and teaching communities. We intend to share our plans with the community to gain feedback on community needs and current stumbling points when implementing MetPy into meteorological workflows.

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