Enabling Discoveries Through Integrated Observations

Mission Statement
FRONT provides the atmospheric science community with an easily accessible, cost-efficient, observational infrastructure for the collection of comprehensive data sets for hydro-meteorology, mesoscale meteorology, climate process studies and for the advancement of technology.

KEY FEATURES
• Dual-polarization network
• Vector winds
• Easy access to other instruments
• Lightning mapping array data
• Control radar and view real-time data
• Testbed for instruments and ideas
• Real-time integrated displays
• Free, open and quick access to all data
• Educational requests encouraged

Community Access to FRONT
• New Standard Operations Mode
  • CHILL and S-PolKa automated activation by forecasts, satellite data and NEXRAD observations
  • Data from radars and other sources stored on a large RAID and accessible via Java-based integrated display system

Summary of proposed NSF LAOF request procedures

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Deployment Pool</th>
<th>Review Procedure</th>
<th>Request Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Operations</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
<tr>
<td>SMALL Request</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
<tr>
<td>Educational Request</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
<tr>
<td>Educational Research Request</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
<tr>
<td>SMALL Request</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
<tr>
<td>Educational Research Request</td>
<td>CHILL and S-PolKa</td>
<td>Science Proposal + Facility Request</td>
<td>Mar 1 and Sep 1, six months before deployment</td>
</tr>
</tbody>
</table>
| Aviation Weather | - In-flight icing
  - ATC and airport control
• Urban Meteorology
  - Air quality
  - Emergency management
• Signal Processing
  - Dual-wavelength
• Data assimilation and modeling
• Mountain meteorology

FRONT Dual-Doppler Radar Coverage

Mission Statement
FRONT provides the atmospheric science community with an easily accessible, cost-efficient, observational infrastructure for the collection of comprehensive data sets for hydro-meteorology, mesoscale meteorology, climate process studies and for the advancement of technology.

FRONT PORCH Experiment
Precipitation Observations and Research on Convection and Hydrometeorology
15 May to 15 Aug. 2014

Main Objectives:
To conduct fundamental research on water-cycle processes in the warm season including soil moisture, water vapor, evaporation, convection initiation, storm development, storm forecasting and the hydrological responses to precipitation in the complex terrain region of the Front Range.