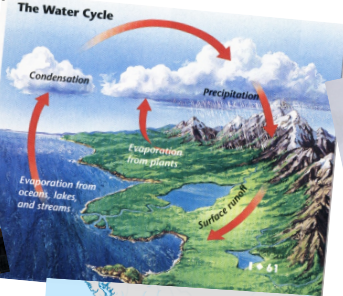


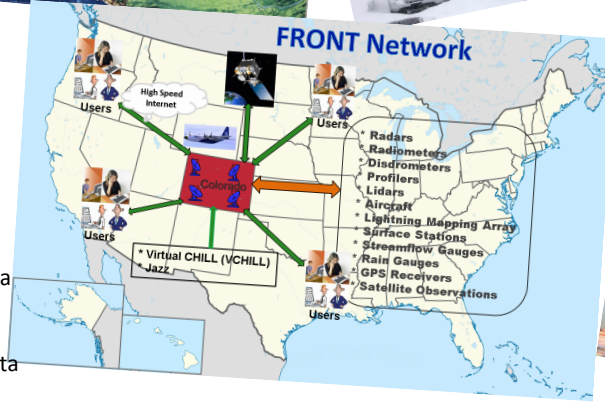
Enabling Discoveries Through Integrated Observations

Vision: FRONT: A testbed for innovative weather, climate and technology exploration; leading, promoting and enabling geoscience research and education



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

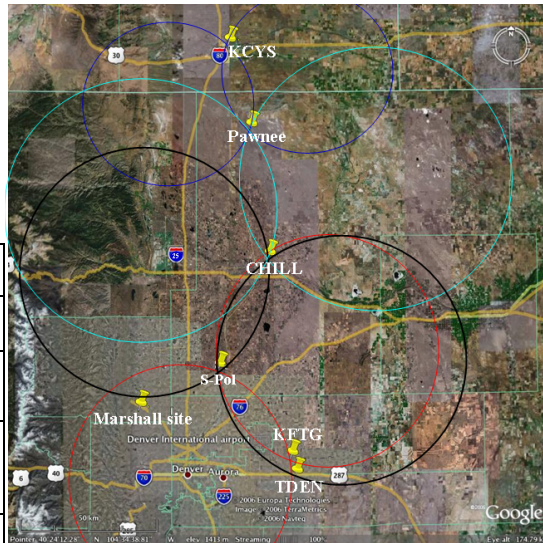
- **New Standard Operations Mode**
 - CHILL and S-PolKa automated activation by forecasts, satellite data and NEXRAD observations
- Data from radars and other sources stored on a large RAID and accessible via Java-based integrated display system

Summary of proposed NSF LAOF request procedures

Operation Type	Deployment Pool Cost	Review Procedure: Science Proposal + Facility Request	Request Due Date
Standard Operations - CHILL and S-Pol :15 May to 15 Aug. plus 1 month	\$0	NA	NA
20-hour Request	\$0	20hr request form + approval by managers of requested facilities	Anytime
Educational Request/ Small Sci. Request	<\$25K*	N/A + two NSF LAOF Facility Managers, two OFAP members + Facility Manager of the requested facility	Mar 1 and Sept 1, six months before deployment
Exploratory Research Request	<\$300K	NSF Program Officer (EAGER or grant supplement) + two NSF LAOF Facility Managers, two OFAP members + Facility Manager of the requested facility	Mar 1 and Sept 1, six months before deployment
Small Campaign (OFAP definition)	<\$1.25M	NSF Peer Review (Independent science proposal.) + Full OFAP	1 Dec or 1 July -18 months before
Large Campaign (OFAP definition)	>\$1.25M	NSF Peer Review (EDO/SPO) + Full OFAP	15 Jan. FY-2 before

* The \$25K limit can be increased for requests involving aircraft.

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 Enabling Science

- Water cycle
 - Water vapor
 - Microphysics
 - QPE
 - Hydrology
- High impact weather
 - Severe storms
 - Winter storms
 - Heavy precipitation
 - Electrification
- Data assimilation and modeling
- Mountain meteorology
- Aviation Weather
 - In-flight icing
 - ATC and airport control
- Urban Meteorology
 - Air quality
 - Air chemistry
 - Emergency management
- Signal Processing
 - Dual-wavelength
 - Dual-polarization
 - Real-time dual-Doppler radar winds
 - Data quality

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 evolution, convection initiation, storm development, storm forecasting and the hydrological responses to precipitation in the complex terrain region of the Front Range.