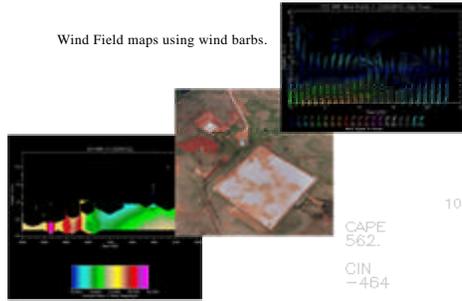


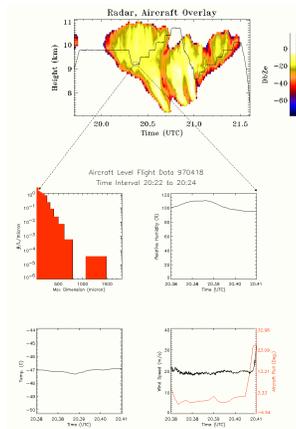
# Visualizing ARM data for the NSF Digital Library and ARM Scientific Community

Christopher Klaus, Chad P. Bahrmann, Keith Andrew, Jay Mace

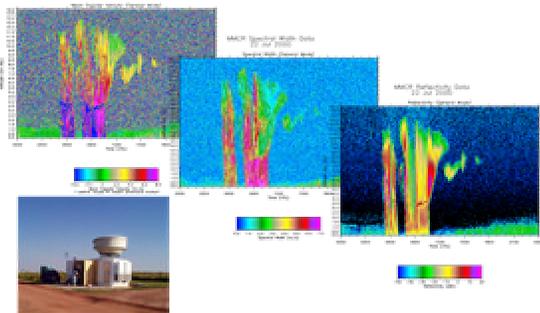


Wind Field maps using wind barbs.

Soon to include Utah's unique interfaces into ARM UAV data.

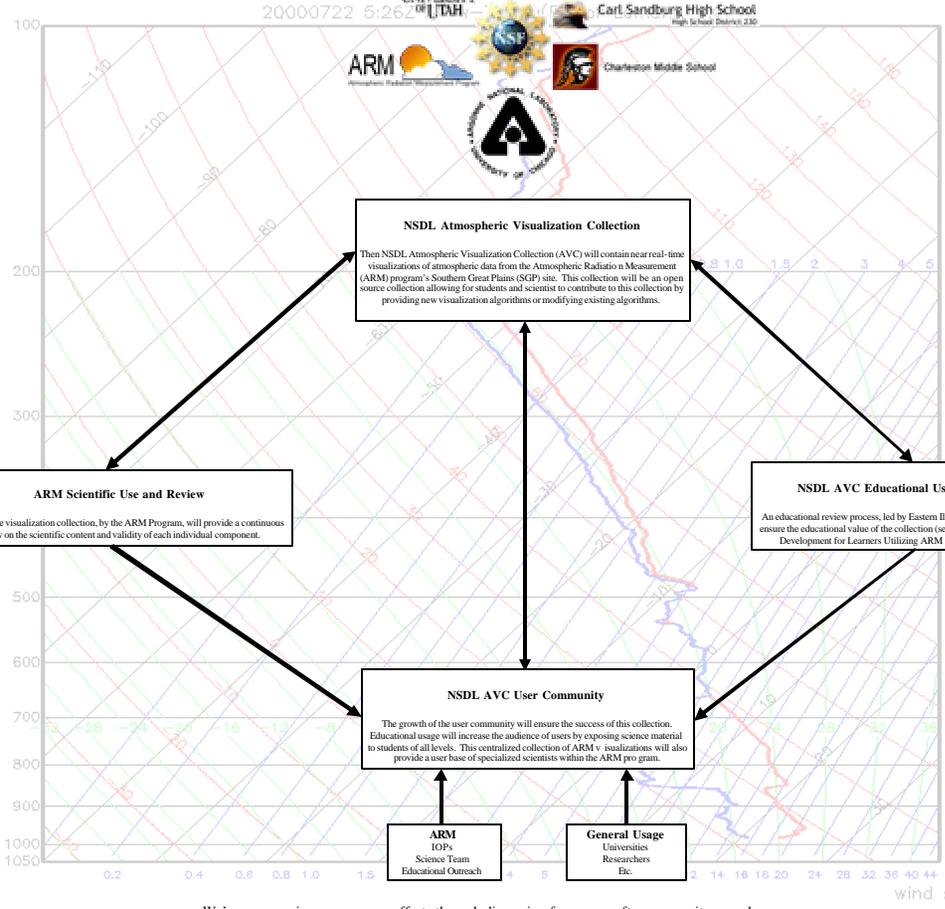


Various time array plots, and basic contour plots.



CAPE 562  
CIN -464  
K Index 26  
LI -0.97  
Showalter 3.39  
LCL 857 mb  
LFC 700 mb  
EL 246 mb

dewpt  
dry



**ARM Scientific Use and Review**  
The use of the visualization collection, by the ARM Program, will provide a continuous review on the scientific content and validity of each individual component.

**NSDL Atmospheric Visualization Collection**  
Then NSDL Atmospheric Visualization Collection (AVC) will contain near real-time visualizations of atmospheric data from the Atmospheric Radiation Measurement (ARM) program's Southern Great Plains (SGP) site. This collection will be an open source collection allowing for students and scientist to contribute to this collection by providing new visualization algorithms or modifying existing algorithms.

**NSDL AVC Educational Use and Review**  
An educational review process, led by Eastern Illinois University (EIU), will ensure the educational value of the collection (see poster "NSDL: Community Development for Learners Utilizing ARM Data", by Andrew et al.)

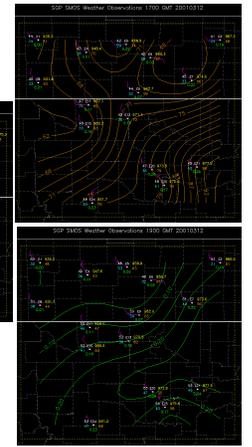
**NSDL AVC User Community**  
The growth of the user community will ensure the success of this collection. Educational usage will increase the audience of users by exposing science material to students of all levels. This centralized collection of ARM v visualizations will also provide a user base of specialized scientists within the ARM program.

**ARM TOPS**  
Science Team  
Educational Outreach

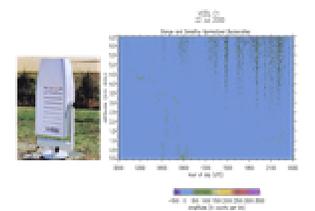
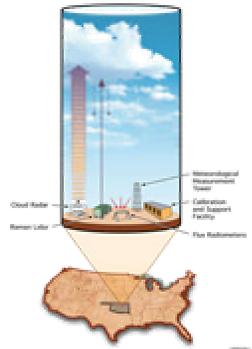
**General Usage**  
Universities  
Researchers  
Etc.

Contours of Surface Meteorology:  
-Barometric Pressure  
-Temperature  
-Relative Humidity  
-Precipitation  
-Wind Chill or Heat Index

Animated Contour Plots



"Develop Quicklooks of Data Through Map Interface"  
The ARM IRF Working Group 2000: A Summary of Accomplishments, Strengths, Weaknesses, and Ideas for Future Activities, p 10.



We're encouraging open source efforts through discussion forums, a software repository, and an interface to distribute ARM visualization from the source.

"...it seems evident from even a cursory scan of the recent proliferation of VAPs that sufficient human resources will never be available within the ARM infrastructure to implement them in a realistic timeframe."  
ARM Vision 2000: As Seen by the ARM Cloud Properties Working Group, p 5.

"Establish a web-accessible repository for PI developed data handling software (shareware)"  
The ARM IRF Working Group 2000: A Summary of Accomplishments, Strengths, Weaknesses, and Ideas for Future Activities, page 10.

Including simple models like Skewt plots in near real-time

