McIDAS Advisory Committee (MAC) Sponsored: Group Discussion

Joleen Feltz[*] and Kristopher Bedka[+]

McIDAS Advisory Committee Co-Chairs

[*]Cooperative Institute for Meteorological Satellite Studies

[+]Science Systems and Applications, Inc. @ NASA Langley Research Center

McIDAS Advisory Committee

- Membership 2011-2012:
  - Kristopher Bedka, Co-Chair (SSAI @ NASA LaRC)
  - Jessica Braun (SSAI @ NOAA/ESPC)
  - Joleen Feltz, Co-Chair (CIMSS)
  - Greg Gallina(NOAA/ESPC)
  - Mat Gunshor (CIMSS)
  - Don Hillger (CIRA)
  - Matt Lazzara (AMRC: Former Chair)
  - Jim Nelson (CIMSS)
  - HP Roesli (EUMETSAT)
  - Dave Watson (CIRA)
  - Tom Yoksas (Unidata: Former Chair)
- Non-voting member: Becky Schaffer (SSEC)

The MAC Needs Your Input!

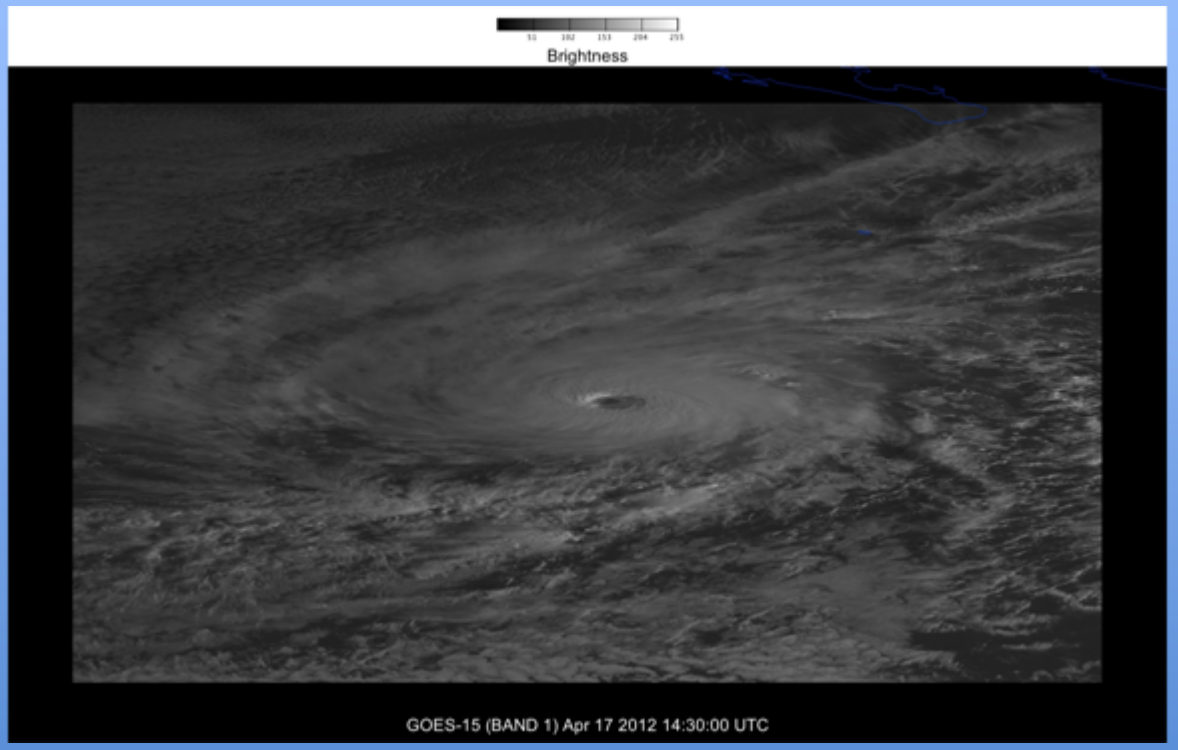
- Provide input on/discuss issues as they arise
  - Two way street: SSEC <==> MAC
  - Address questions or concerns for any of McIDAS or Datacenter products: -V, -X, -XCD, SDI, ADDE
- MAC is your advocate! If your site does not have a representative, consider becoming a member of the MAC
- If your MUG site is not represented, contact co-chairs: joleen.feltz@ssec.wisc.edu or kristopher.m.bedka@nasa.gov

Some Recent Topics Discussed Within MAC

- McIDAS-V performance, scripting, and usage on a remote machine
- Publication quality graphics in McIDAS-V
- How will Mc-V support specialized Mc-X capabilities?
- CDM updates to accommodate new grib naming conventions
- SPIDER and other tools built on the scheduler

Scripting

- Direction influenced by scientist working within the GOES-R Imagery and Visualization project
- Loading hdf and ADDE files
- Building the McIDAS window and displaying layers
- Adding maps, setting projection, applying color tables and color bars
- Statistics and formulas
- Text files from probes, statistics and other data analysis features.



What scripting tools/capabilities would be useful for your organization? What doesn't Mc-X do that you would like to do in Mc-V?

Publication Quality Graphics

• Publication quality graphics means different things to different people, and there may be different requirements for various journals vs. powerpoint presentations

• MAC members were asked to provide examples of graphics they perceive to be “publication quality”

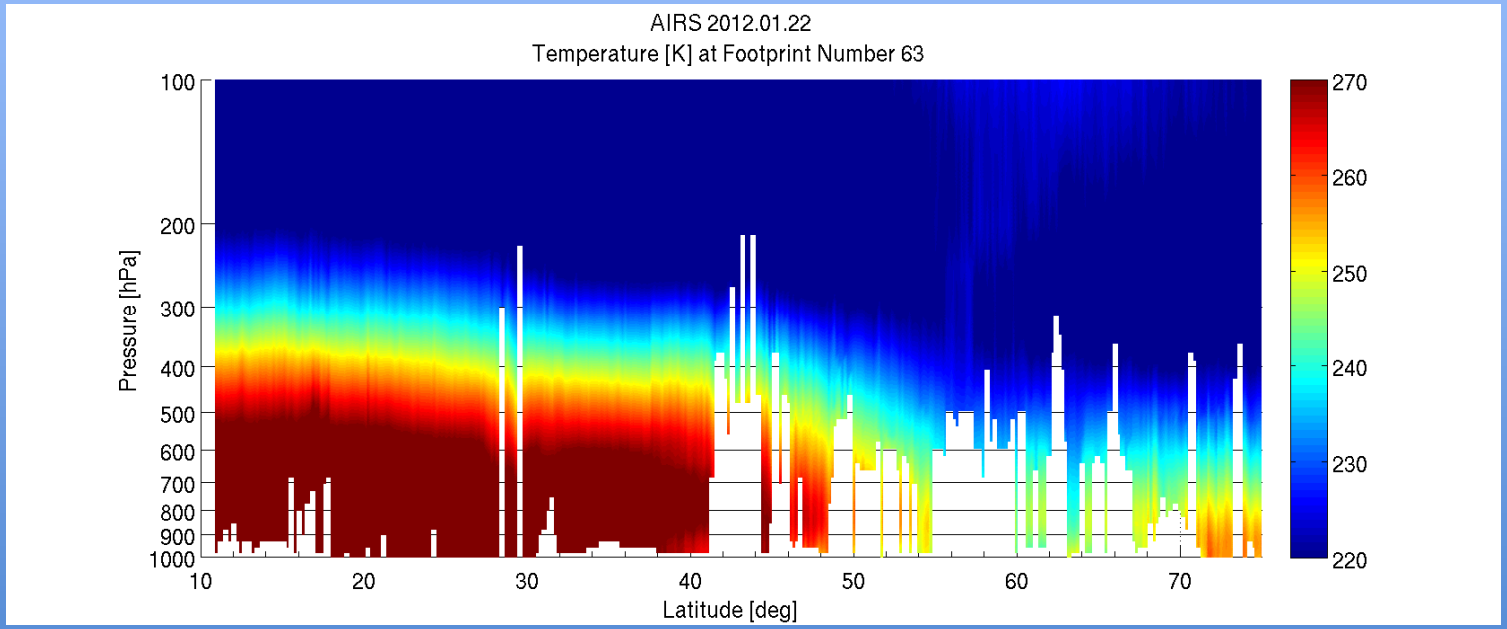
• Primary theme of submissions was a desire for “user control”

1) User-selectable font type, size, weight
2) Adjustable tick mark intervals, axis range, axis/colorbar labels, and titles
3) Lat/lon labels and grid lines
4) Pressure (or other parameter, i.e. wavenumber) as a vertical coordinate
5) Image size in width x height in inches or number of pixels
6) Adjustable dots per inch

•Questions: What are the highest “priorities” and what should the dividing line be between Mc-V and matlab/IDL?

Publication Quality Graphics

Cross Section of Temperature by Pressure Level (MATLAB, Dr. Elisabeth Weisz, UW-CIMSS)

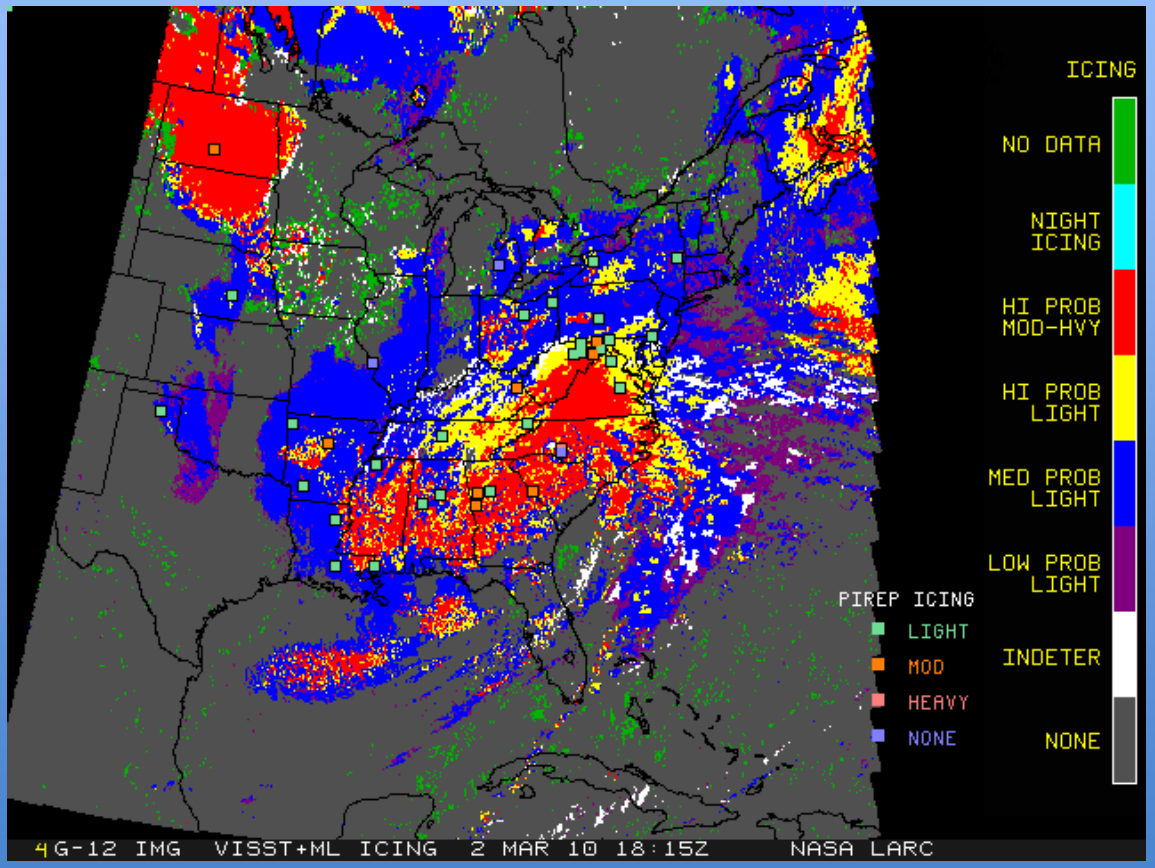


- Cross-Section with y-axis of properly scaled (pressure as height is desired for 3D surfaces as well.)
- Grid within cross-section for easier determination of feature locations
- Color bar location can be plotted with cross-section
- Crisp colors and clean fonts

Publication Quality Graphics

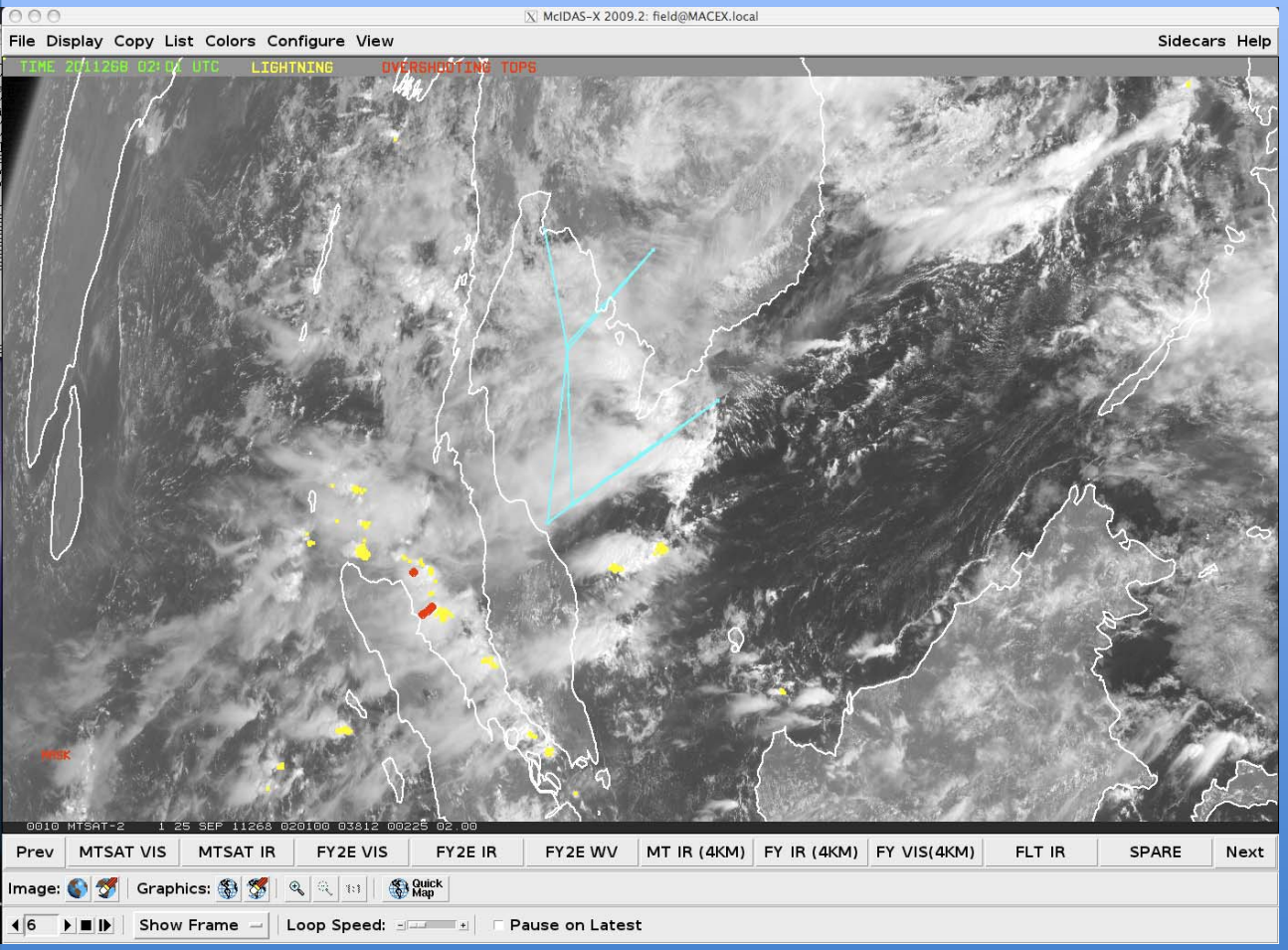
Non-Numeric Colorbar Labels

(McIDAS-X, Doug Spangenberg, NASA LaRC)



- 2-D image data overlaid with point dataset created in McIDAS-X
- Customized colorbar has user-selected, non-numeric labels
- Point data legend also included within the plot

How Will Mc-V Support Specialized Mc-X Capabilities?



- Mc-X GUI frequently used by NASA LaRC to provide on-site flight planning support at field experiments
- Real time geostationary image loops ingested via Mc-X scheduler and attached to GUI buttons
- Objective point-based datasets such as severe thunderstorm and lightning detection displayed via BATCH files
- Real time aircraft positions for multiple aircraft acquired from web page and overlaid via virtual graphic
- Display system must be reliable and cannot crash or lag when aircraft are enroute

Common Data Model (CDM) Update

- GRIB naming convention changes will affect the loading of GRIB data in old IDV and McIDAS-V bundles
- UNIDATA is working to minimize impact to users by updating the CDM and addressing concerns raised by the user community

Discussion

- What features are regularly used in McIDAS-X and how will these be supported in McIDAS-V?
- What is currently problematic in Mc-X or Mc-V?
- Necessary but currently unavailable features?
- Expectations?
- Other comments, questions or suggestions?