GOES-R Fire and Moisture Data Viewed with McIDAS-V

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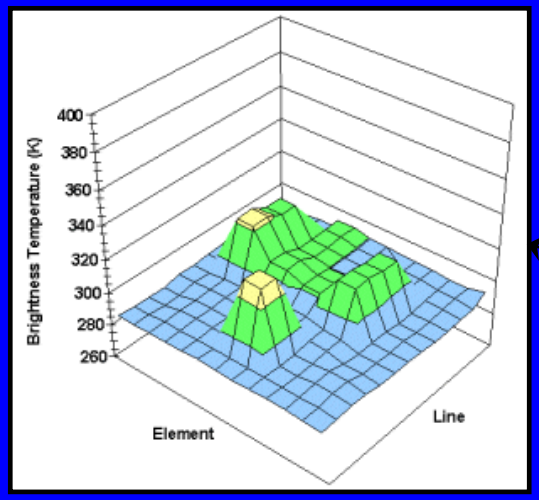
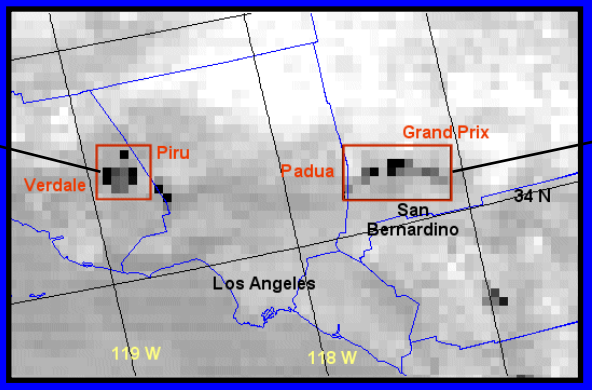
Goals

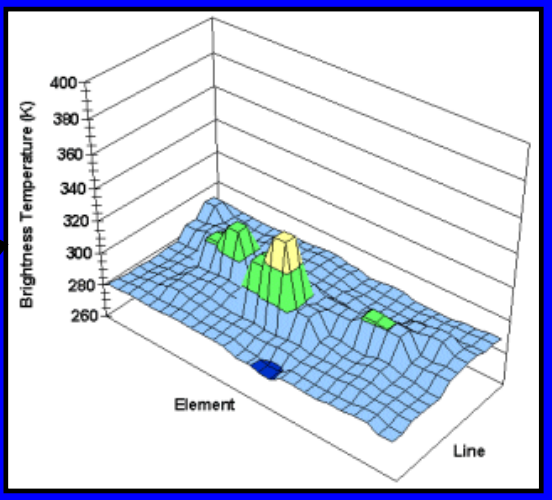
- Use McIDAS-V instead of writing data from McIDAS-X and completing analysis in other software.
- Highlight the advantage in fire detection of higher spatial resolution and higher saturation temperature of GOES-R.
- View GOES-R water vapor data in a new way.

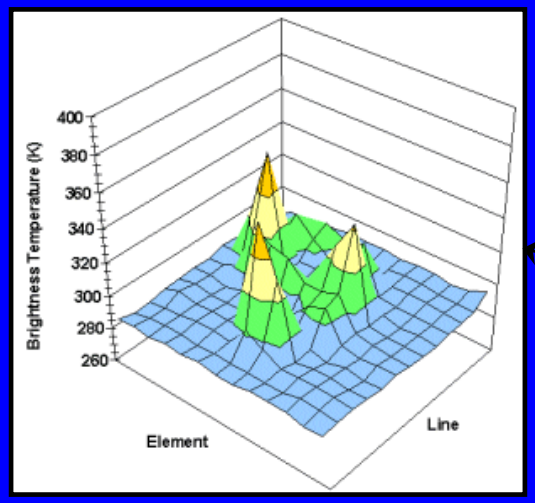
GOES-R and GOES-I/M Simulations of Southern California Fires



GOES-12 Simulated 3.9 micron Data
Padua/Grand Prix Fires
Date: 27-Oct-03 Time: 09:50 UTC







GOES-R Simulated 3.9 micron Data
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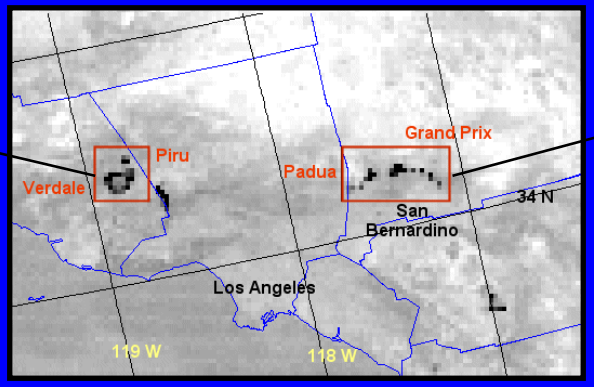
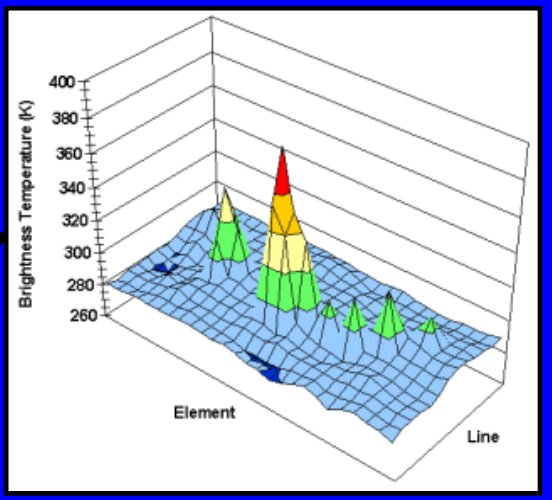




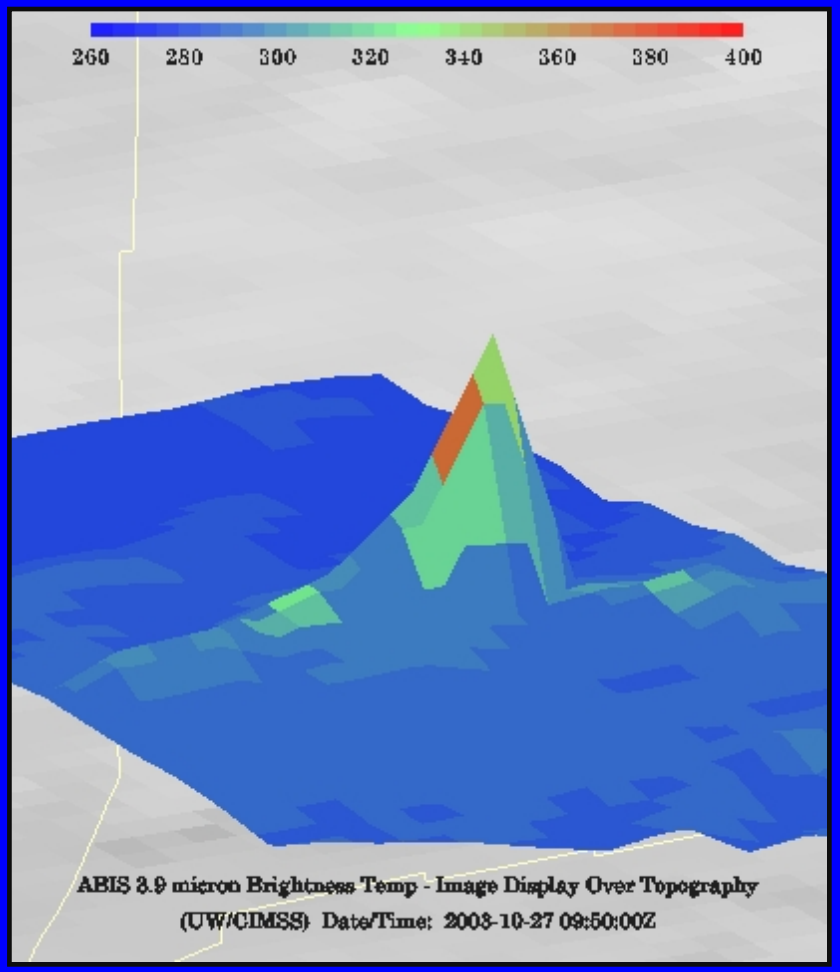
Brightness Temperature (K)

260-280 280-300 300-320 320-340 340-360 360-380 380-400

Figure courtesy of Elaine Prins

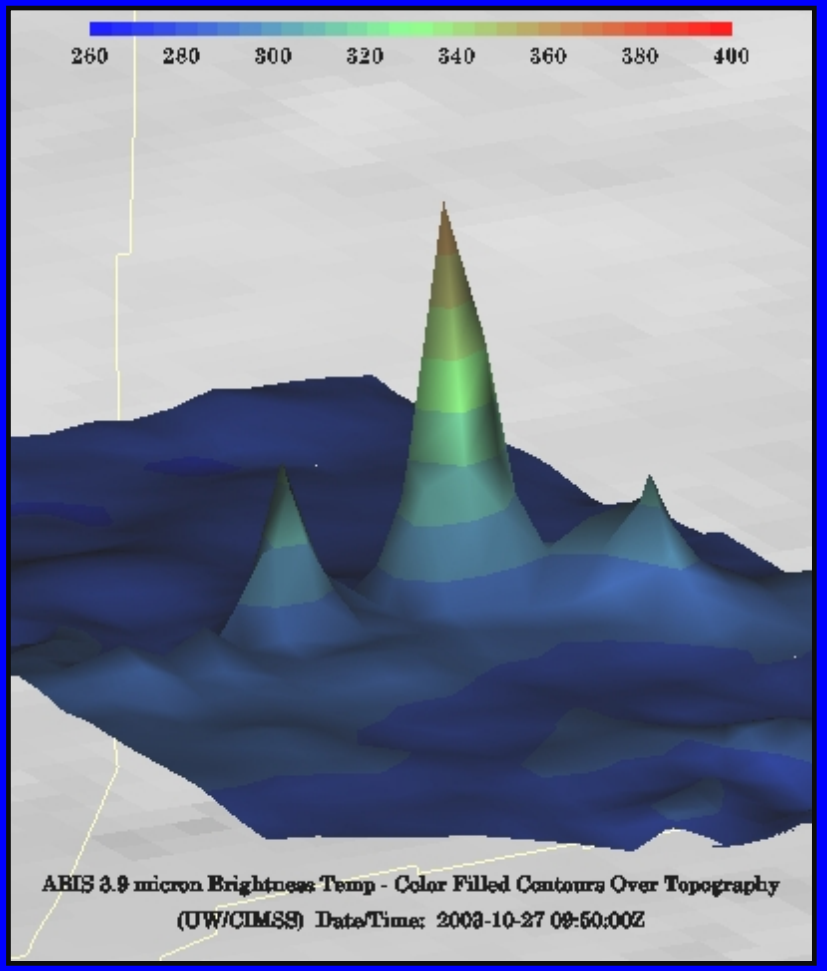
Option 1: Image Display Over Topography

- Faster than other options: a good choice for finer resolution data
- Better choice for large datasets
- Visual definition is based on image pixels
- At 2 km GOES-R data is too coarse for the texture mapping used to create the display

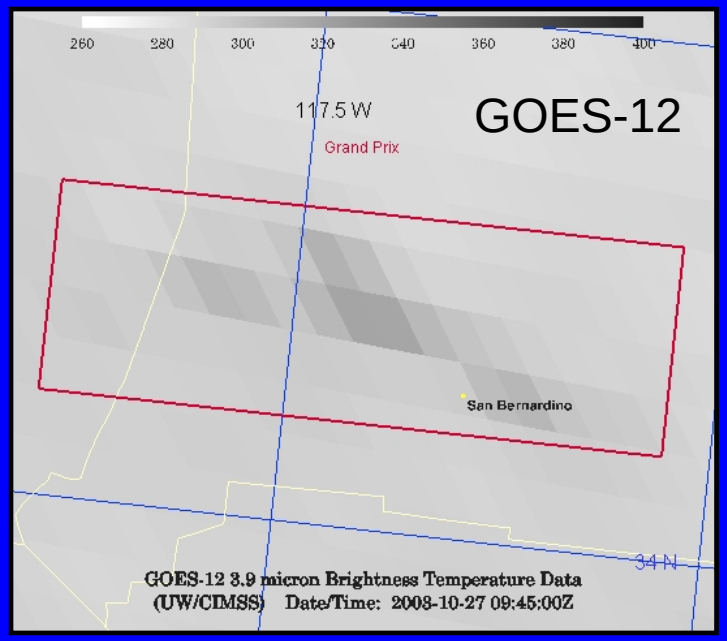


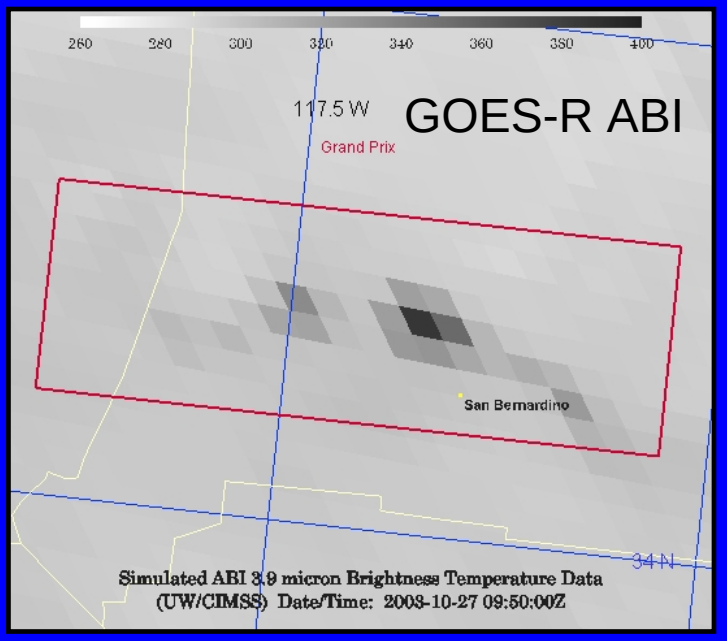
Option 2: Color Filled Contours Over Topography

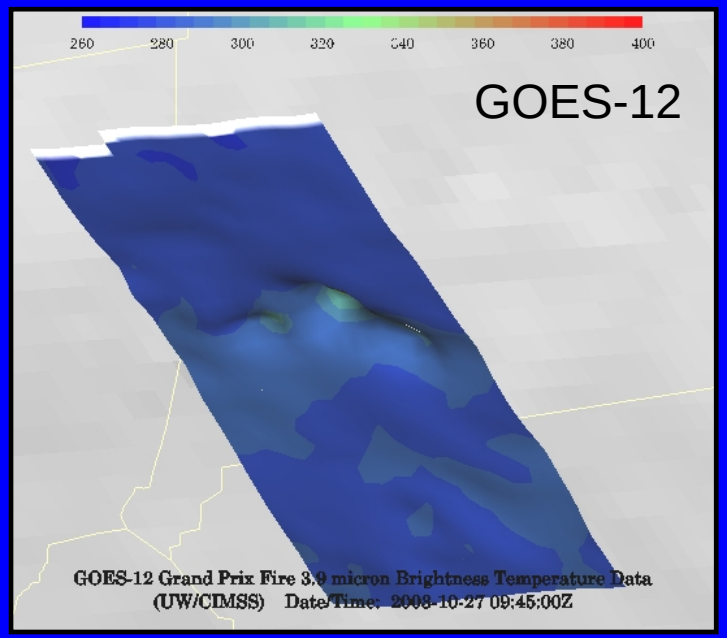
- Memory intensive: must restrict dataset size
- Developers are addressing the use of memory resources
- Better for lower resolution data

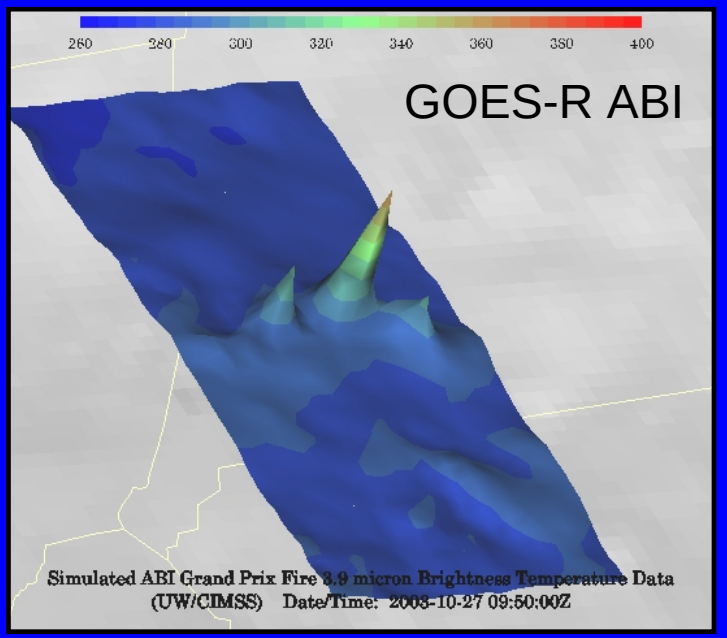


GOES-12 and GOES-R ABI
Simulation of Grand Prix Fire/Southern California









Advantages

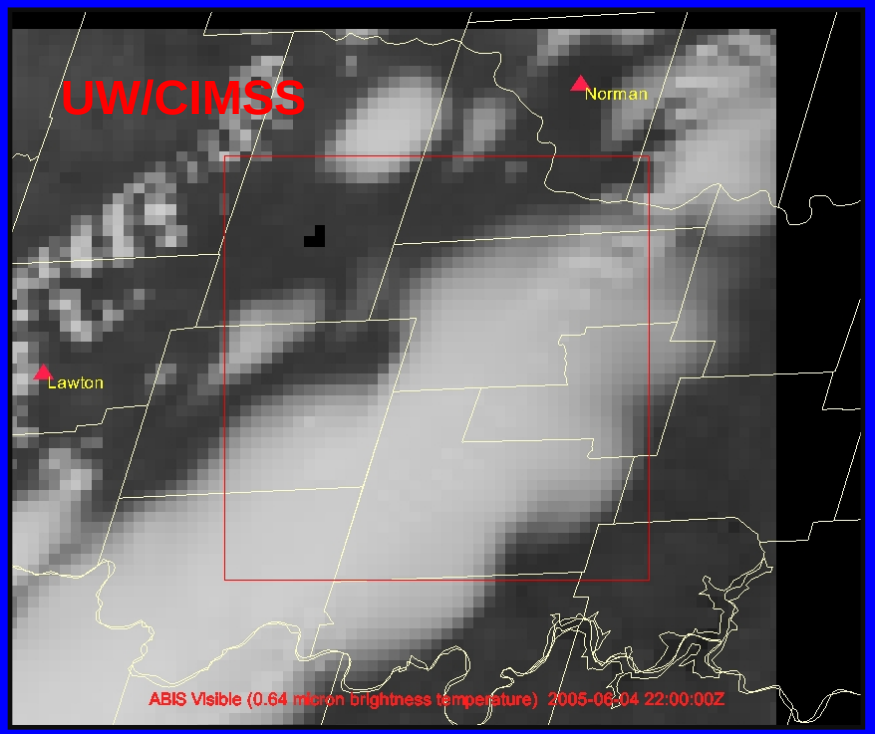
- One data analysis tool is used which has excellent navigation.
- The individual images can be linked so zoom, pan and rotation can be done as a group.
- Flexible – Can change location of data within program if first choice is not what was desired.

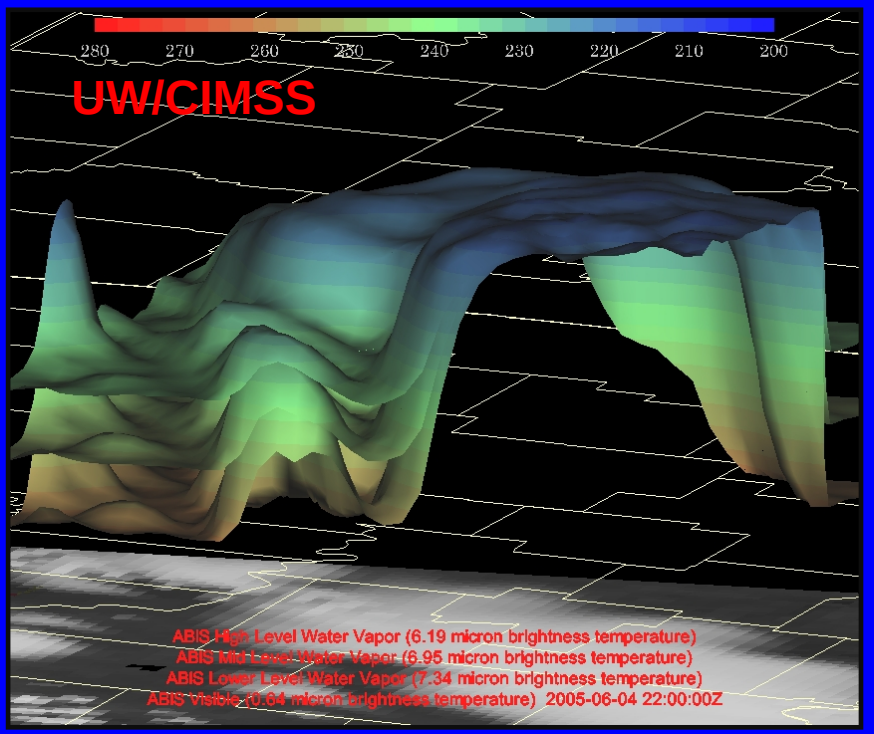
More Information

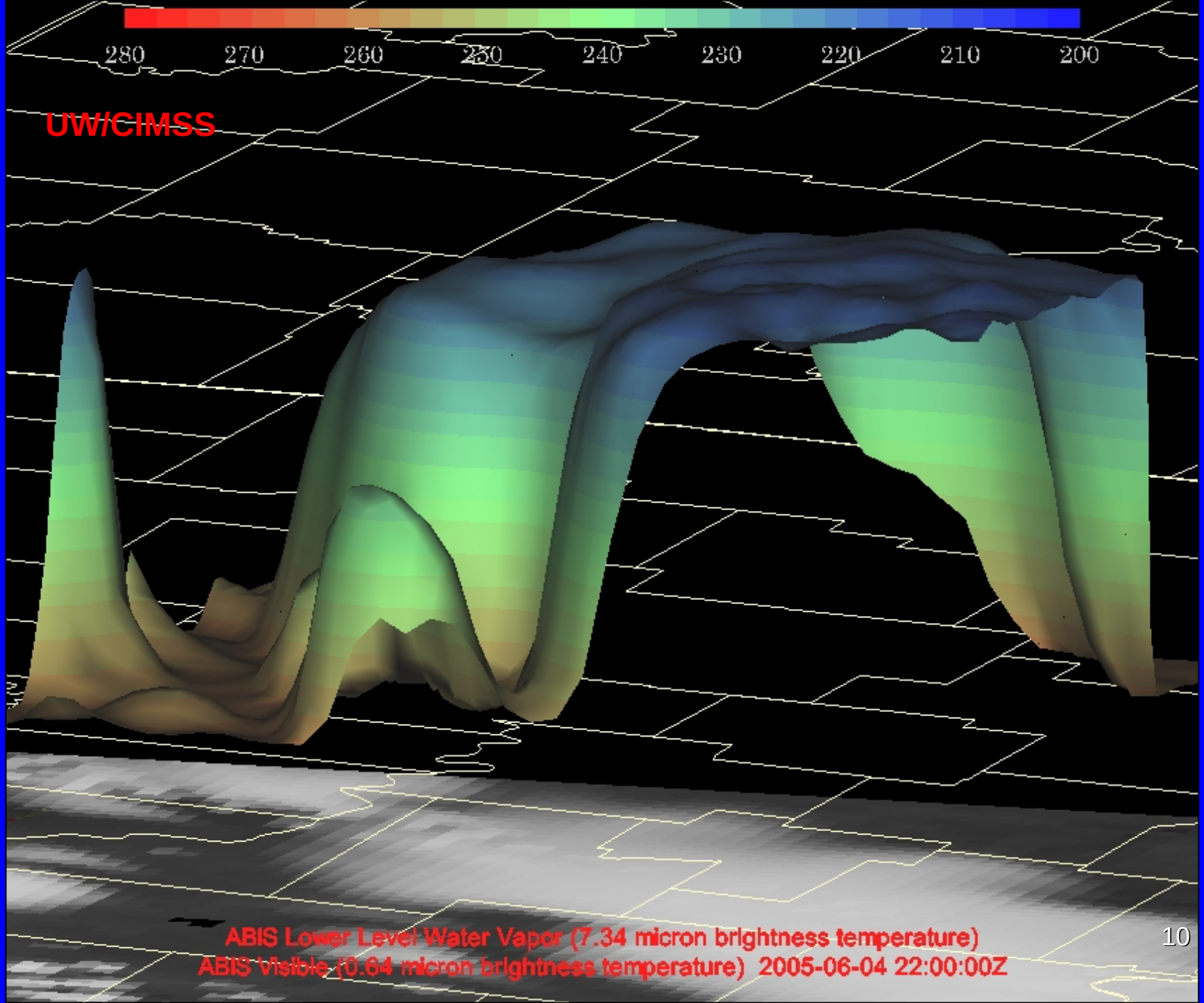
http://dcdbs.ssec.wisc.edu/mcidasv/forums/

- MUG Forum: Tips and Tricks – Displaying satellite data fields in three dimensions
- MUG Forum: Bundles – Color Filled Contours over Topography

GOES-R ABI Moisture Channels



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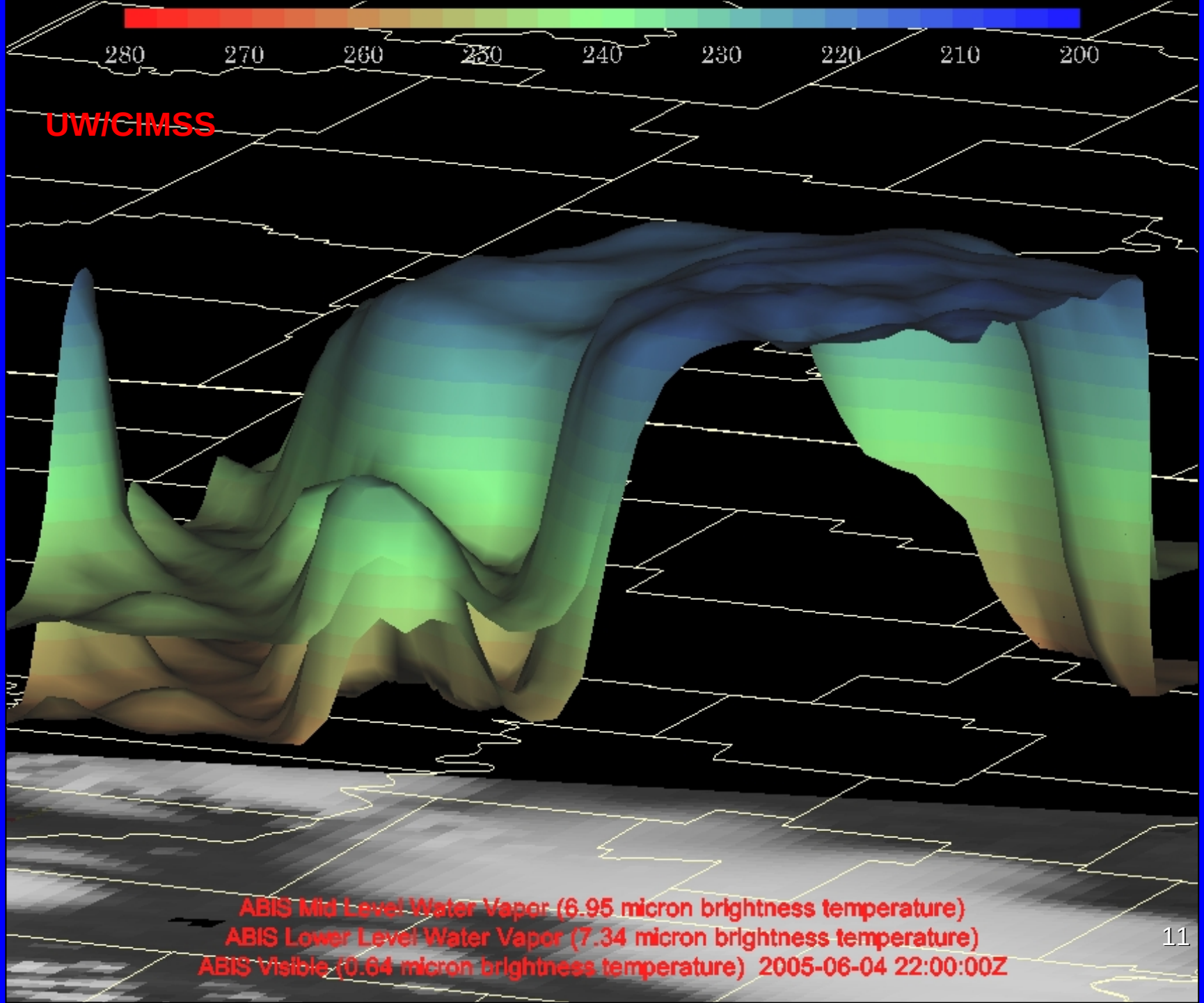
UW/CIMSS
ABIS Lower Level Water Vapor (7.34 micron brightness temperature)
ABIS Visible (0.64 micron brightness temperature) 2005-06-04 22:00:00Z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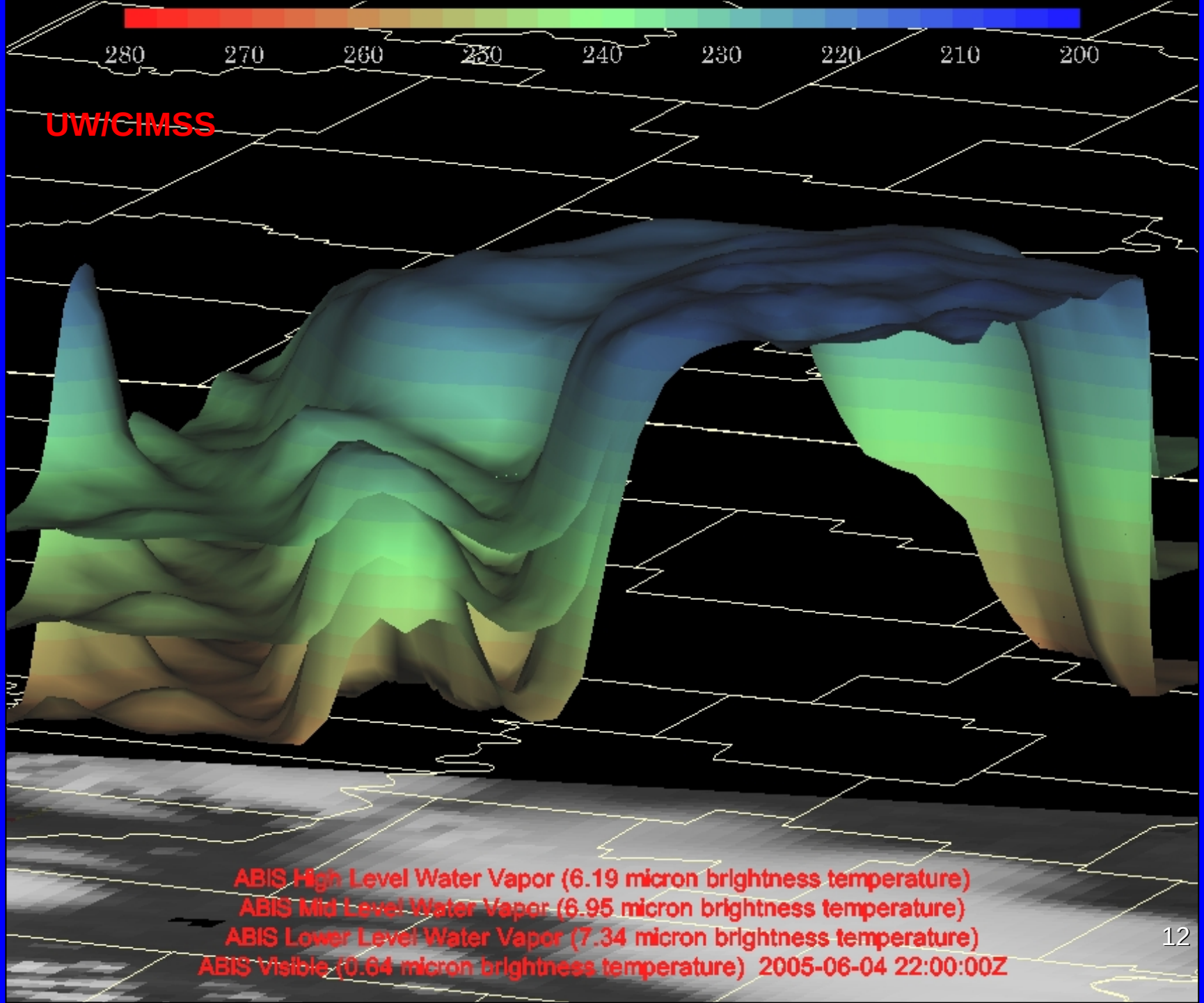
UW/CIMSS
ABIS Mid Level Water Vapor (6.95 micron brightness temperature)
ABIS Lower Level Water Vapor (7.34 micron brightness temperature)
ABIS Visible (0.64 micron brightness temperature) 2005-06-04 22:00:00Z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UW/CIMSS
ABIS High Level Water Vapor (6.19 micron brightness temperature)
ABIS Mid Level Water Vapor (6.95 micron brightness temperature)
ABIS Lower Level Water Vapor (7.34 micron brightness temperature)
ABIS Visible (0.64 micron brightness temperature) 2005-06-04 22:00:00Z