



Meteorological Modeling Update

TexAQS II Episodes

Southeast Texas Photochemical Modeling Technical Committee

April 24, 2007



Update Outline

- Episode Status
- Modeled vs Observed Winds (17m and 10m)
- PBL Time Series & Tile Plots
- Variable Sea Surface Temperature Run
- Future Work



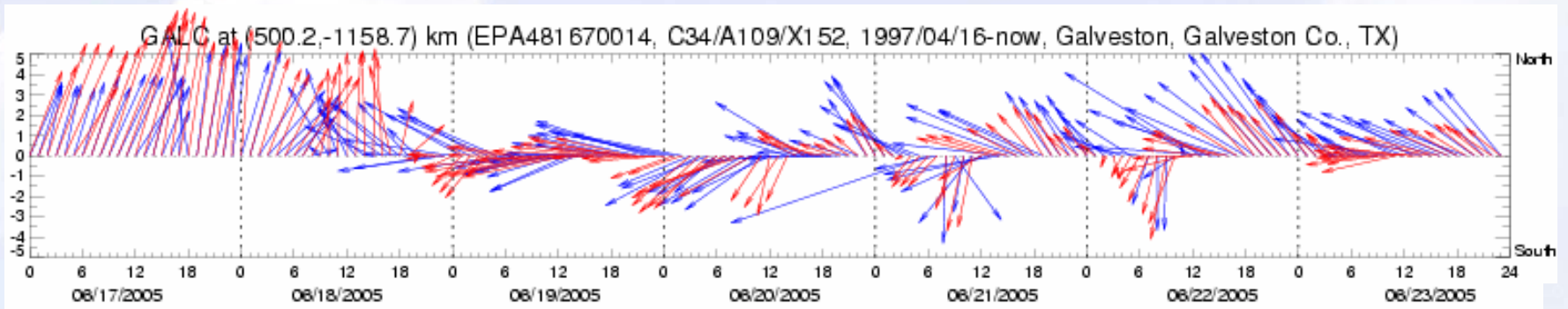
Episode Status

- May 18 – June 3, 2005
 - Spinning up
- June 15 – June 30, 2005
 - Base runs complete (fdda)
 - “Sensitivity-ing”
- July 25 – August 9, 2005
 - Base runs complete (fdda)
 - SST, PBL, and other sensitivities run
 - Combo runs going
- 2006 Episodes
 - Waiting in the wings...

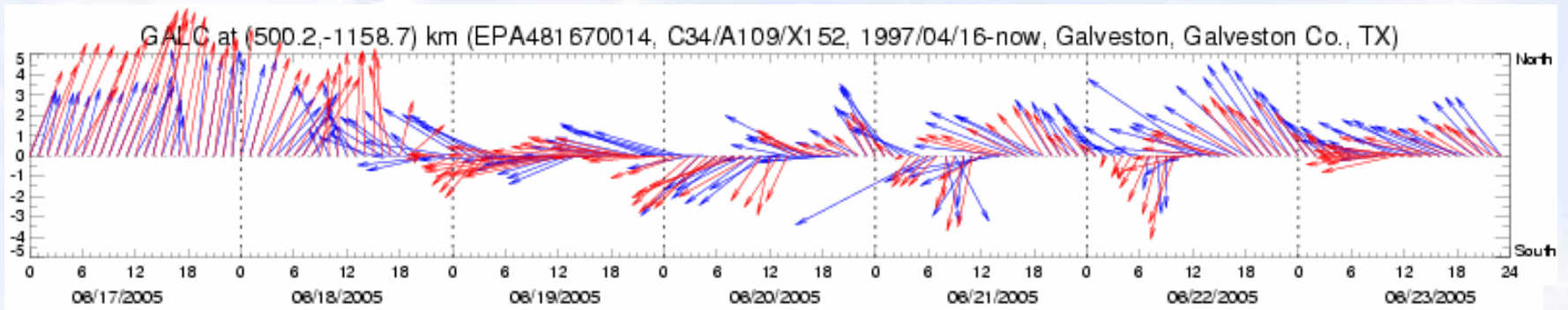


CAMx-ready Winds (2005ep1)

Original comparison: 17m vs observed



Interpolated comparison: 10m vs observed

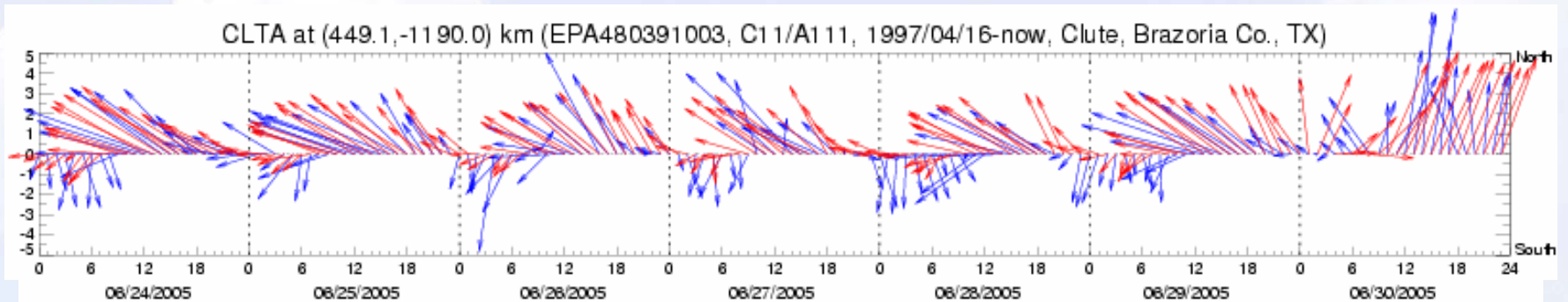


— CAMx/MM5 2005ep1_eta_fdda
— Observed

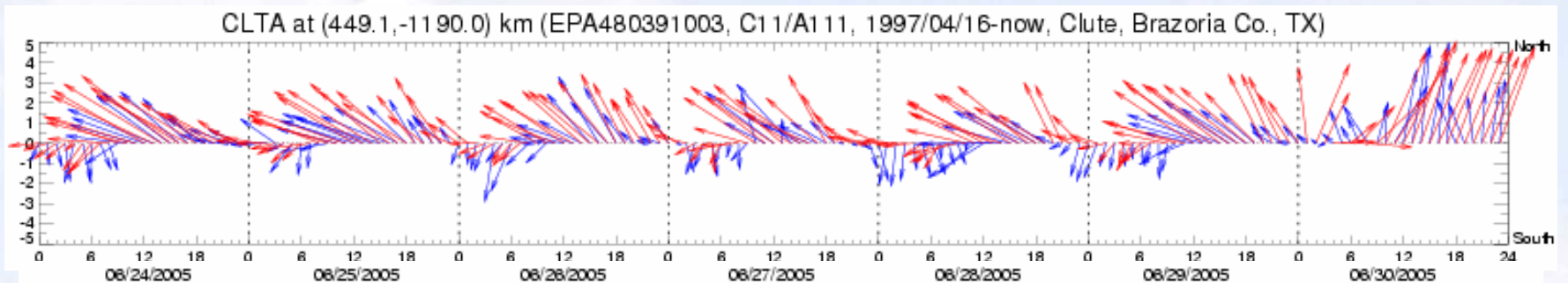


CAMx-ready Winds (2005ep1)

Original comparison: 17m vs observed



Interpolated comparison: 10m vs observed

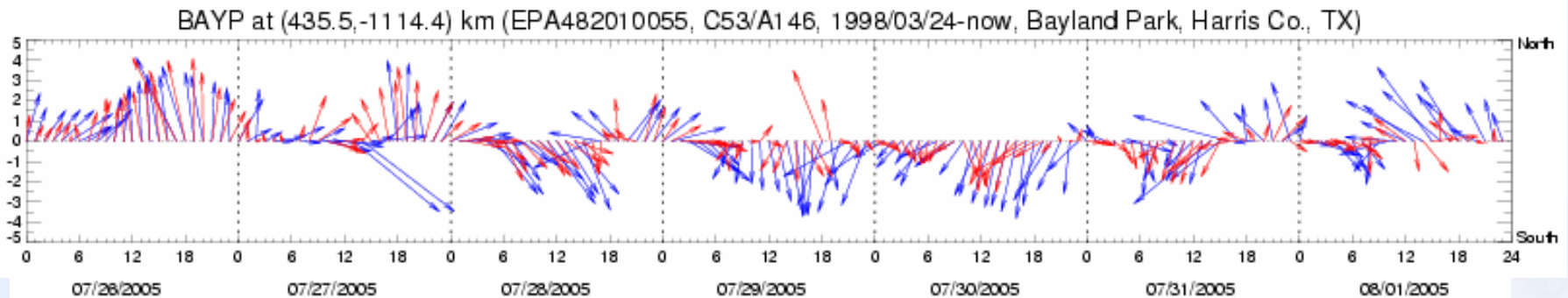


— CAMx/MM5 2005ep1_eta_fdda
— Observed

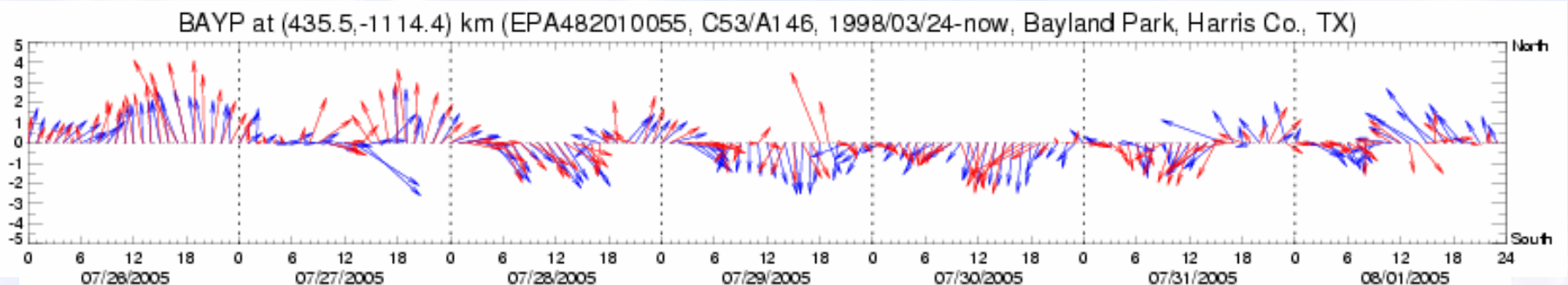


CAMx-ready Winds (2005ep2)

Original comparison: 17m vs observed



Interpolated comparison: 10m vs observed

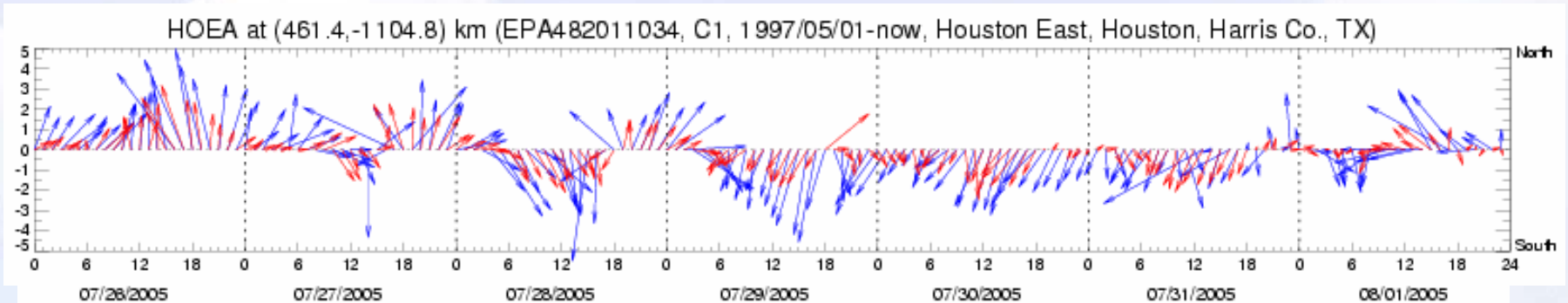


— CAMx/MM5 2005ep2_eta_dbemis_fdda
— Observed

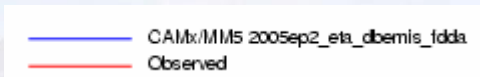
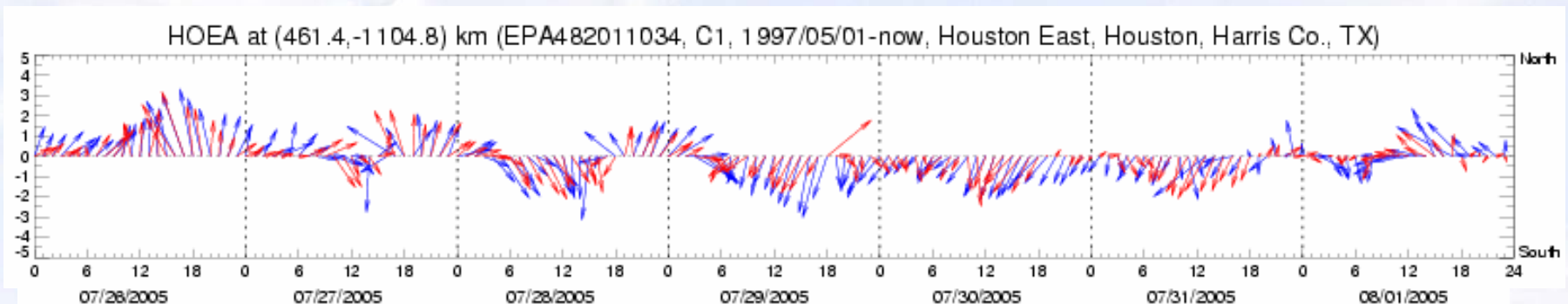


CAMx-ready Winds (2005ep2)

Original comparison: 17m vs observed



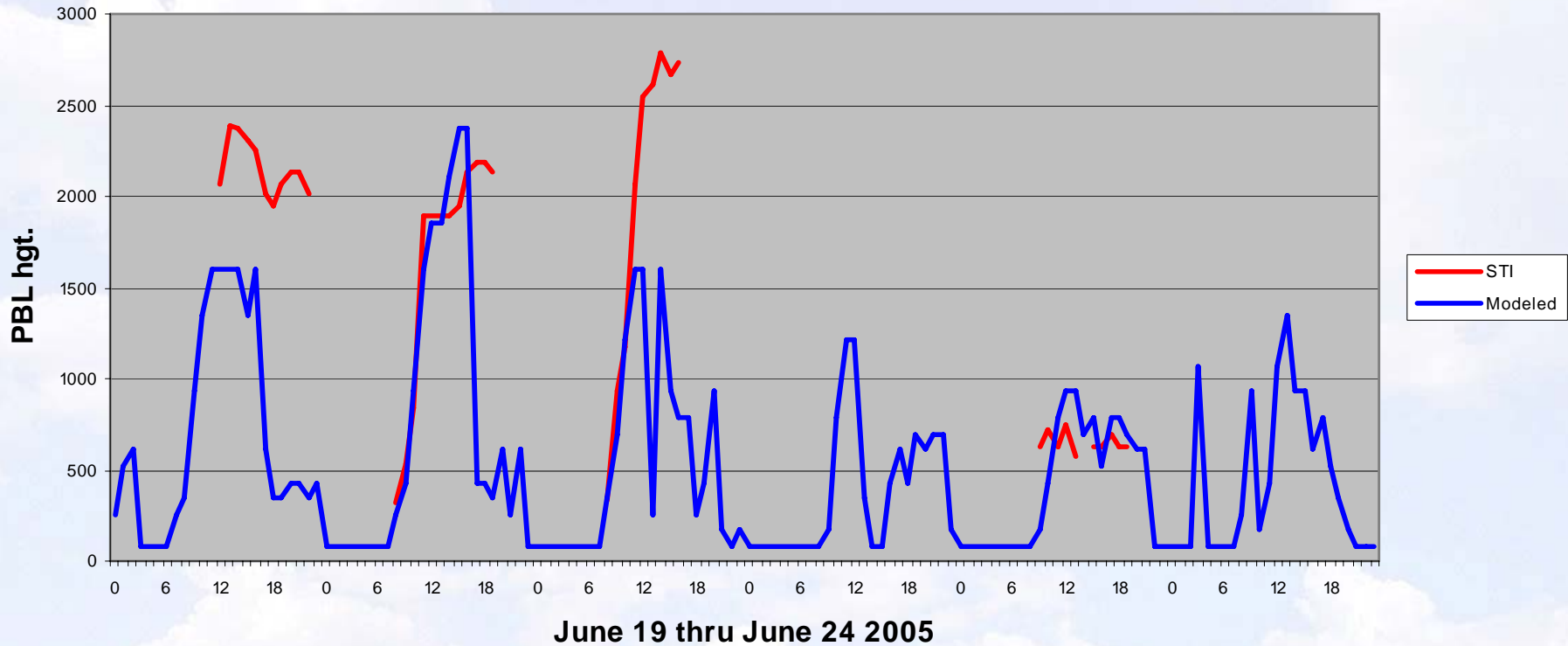
Interpolated comparison: 10m vs observed





2005ep1: PBL Time Series

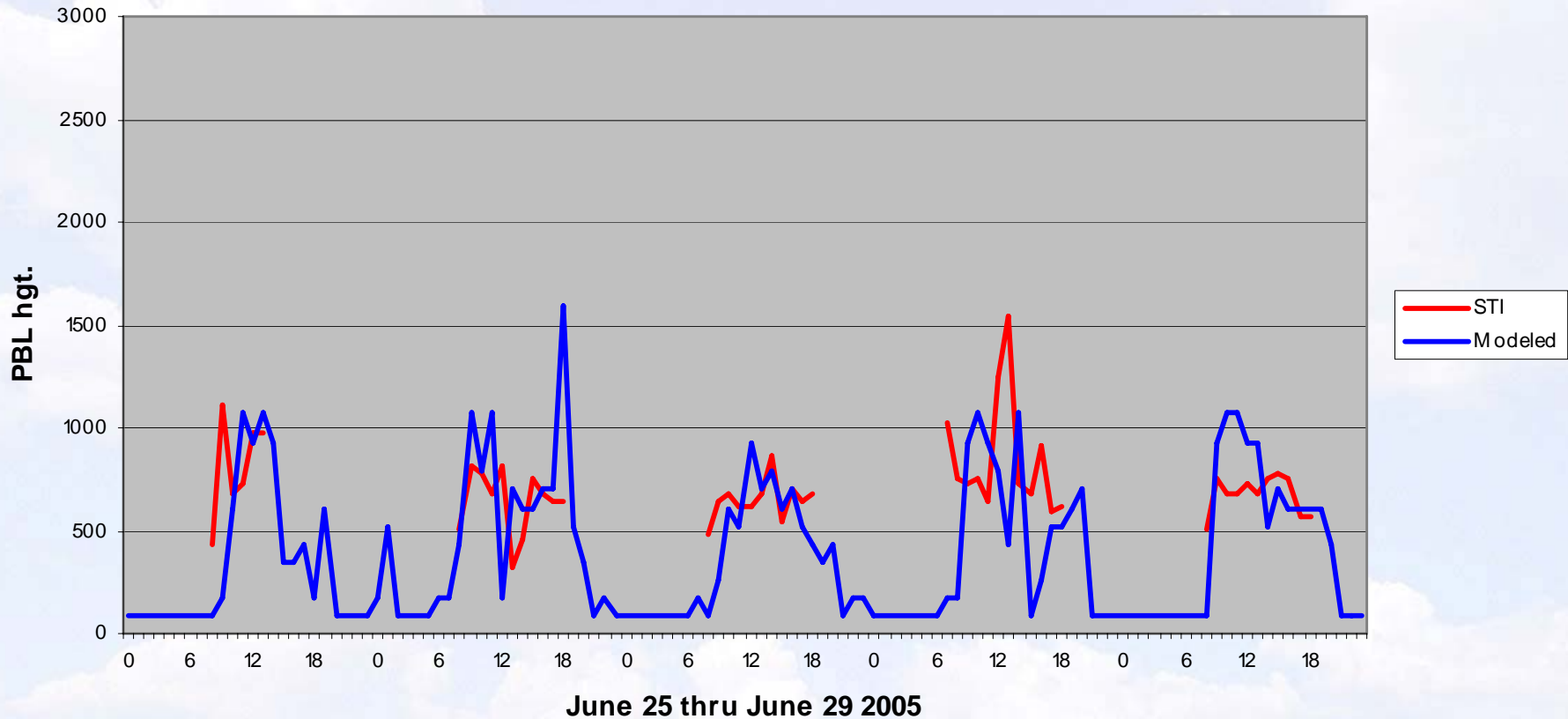
LaPorte





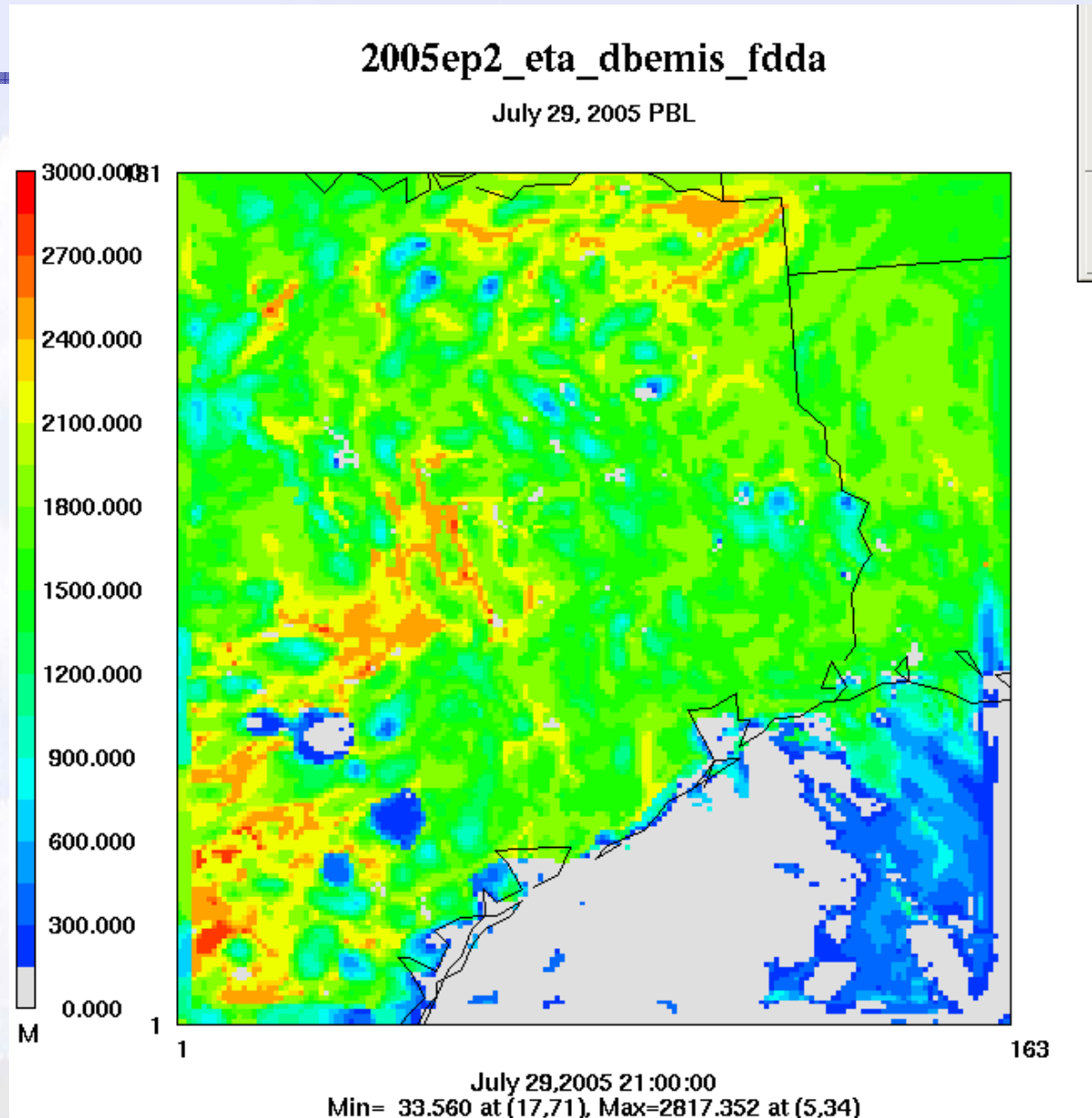
2005ep1: PBL Time Series

LaPorte





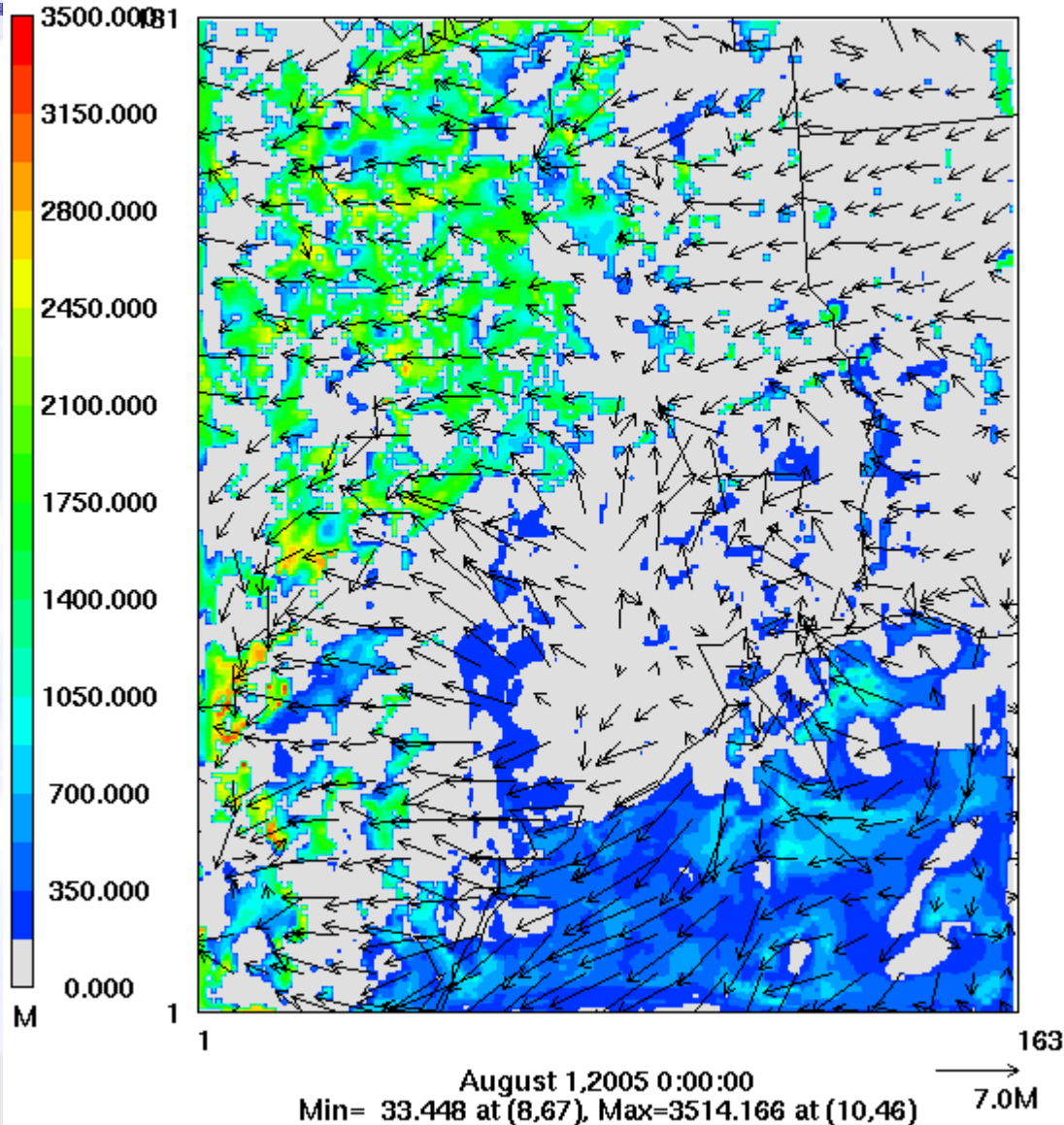
2005ep2: PBL Plots





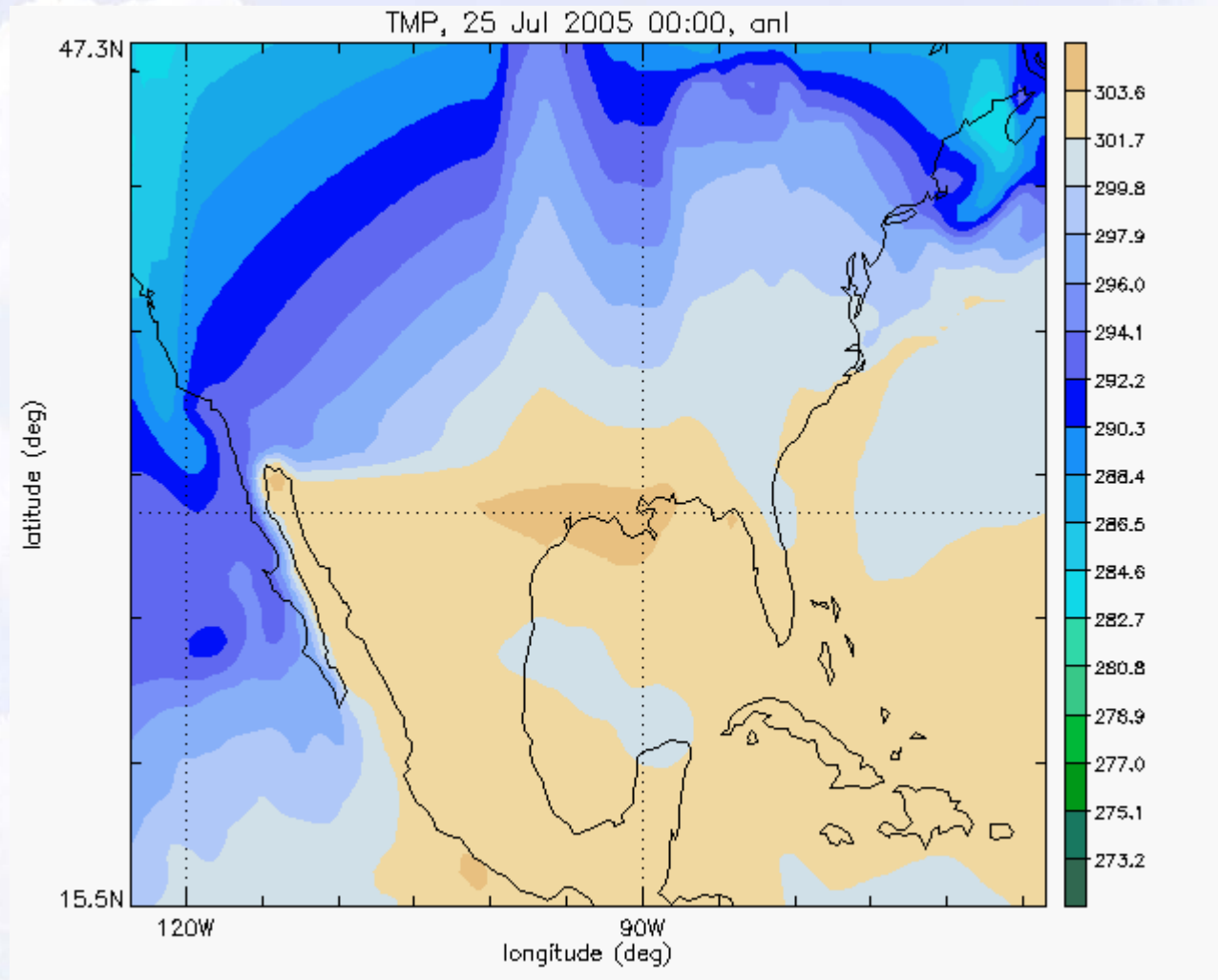
2005ep2_eta_dbemis_fdda

PBL & Layer 1 Winds
August 1, 2005





2005ep2: SST

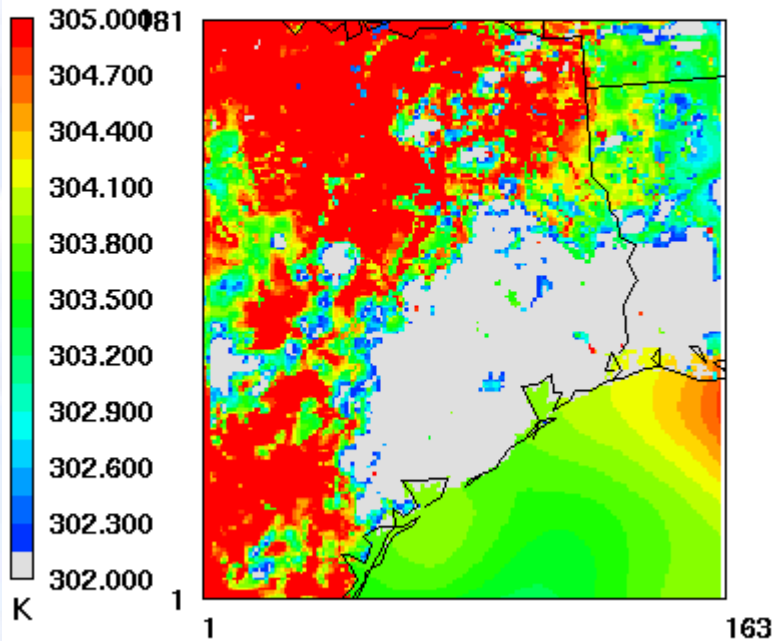




2005ep2: SST

2005ep2_eta_dbemis_fdda_ncepsst

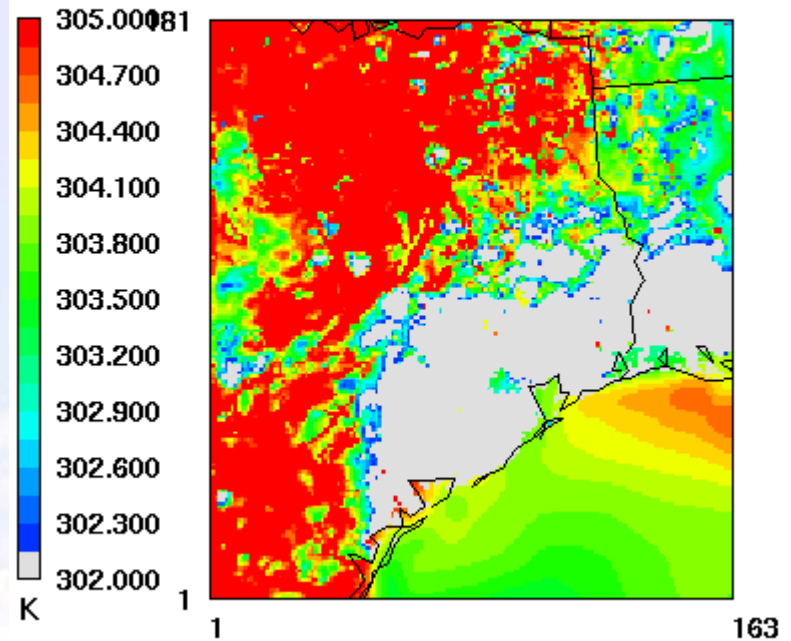
Surface Temperature
August 1, 2005



August 1, 2005 0:00:00
Min= 295.455 at (134,70), Max= 312.111 at (52,152)

2005ep2_eta_dbemis_fdda

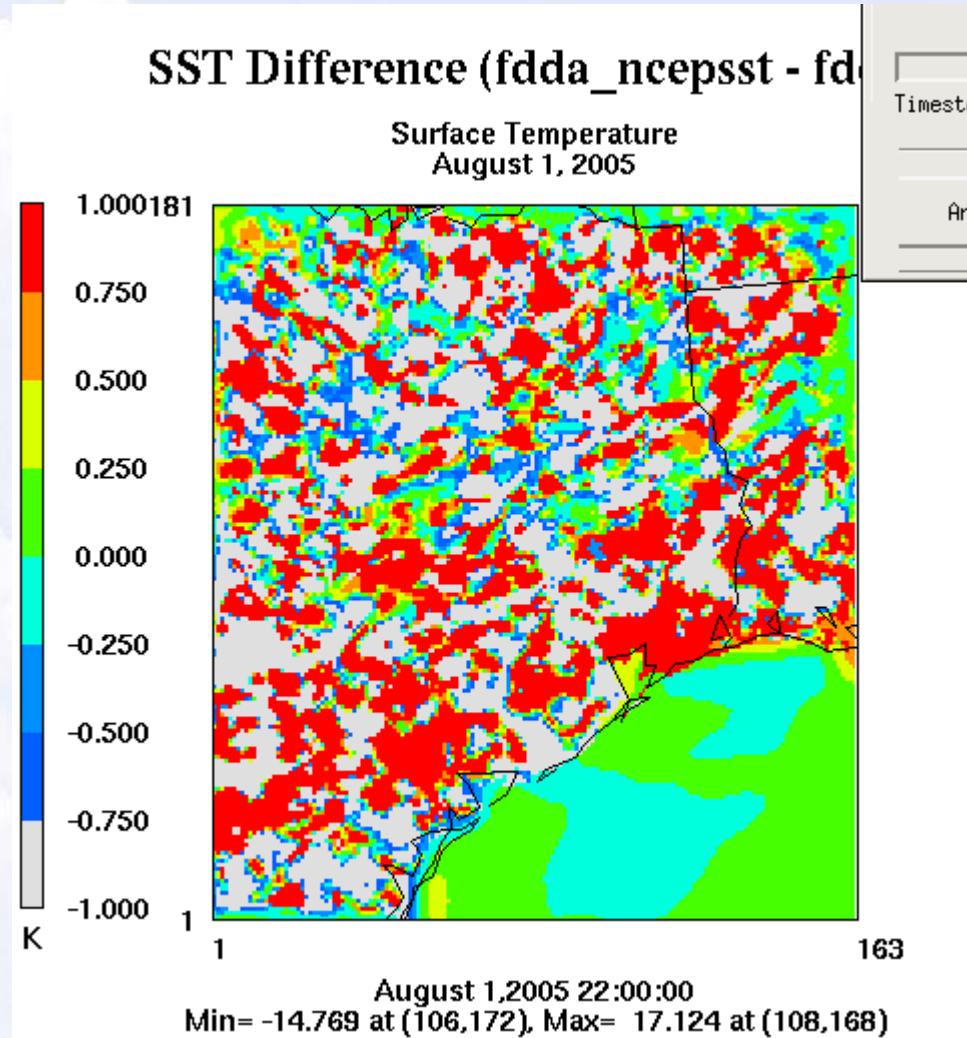
Surface Temperature
August 1, 2005



August 1, 2005 0:00:00
Min= 295.337 at (74,54), Max= 312.079 at (44,149)



2005ep2: SST

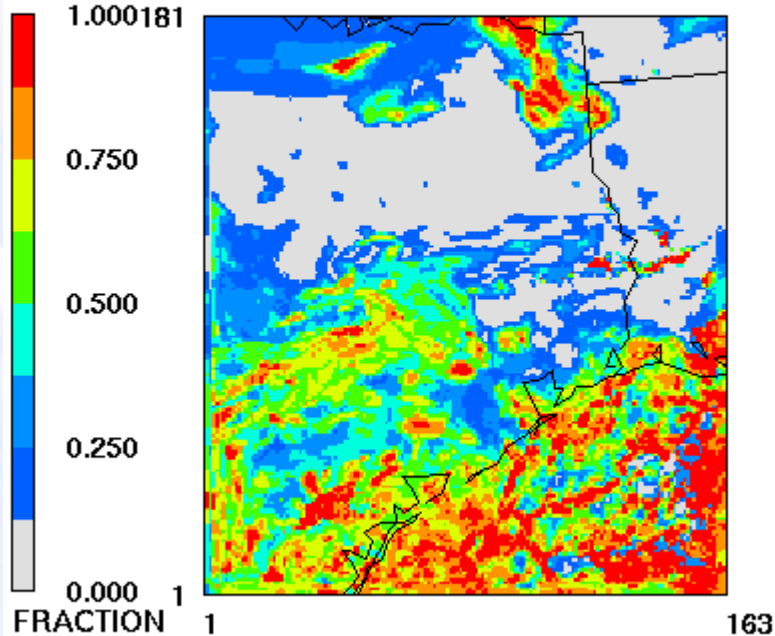




2005ep2: SST

Layer 1 CFRACc

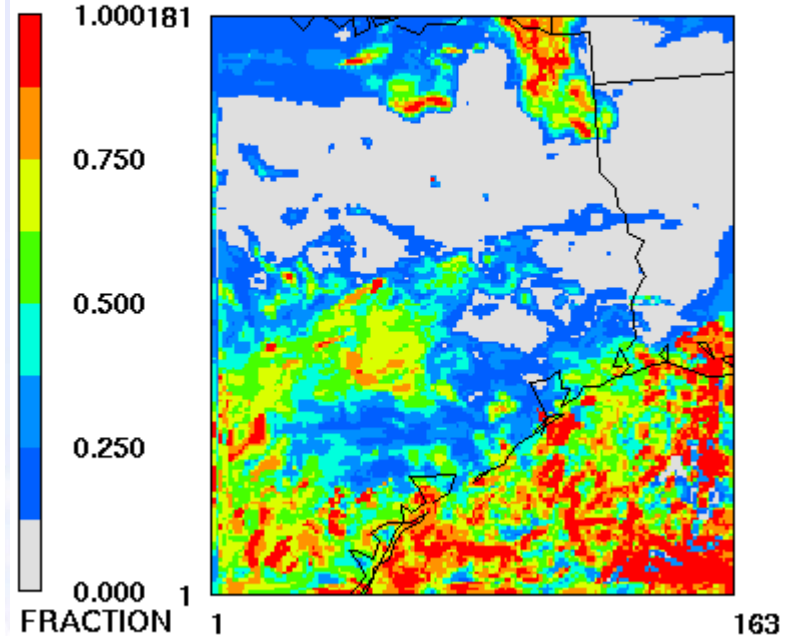
c=METCRO2D_2005ep2.d4.eta.dbemis.fdda.ncepsst_080



August 1, 2005 16:00:00
Min= 0.000 at (91,86), Max= 1.000 at (39,1)

Layer 1 CFRACd

d=METCRO2D_2005ep2.d4.eta.dbemis.fdda_0801

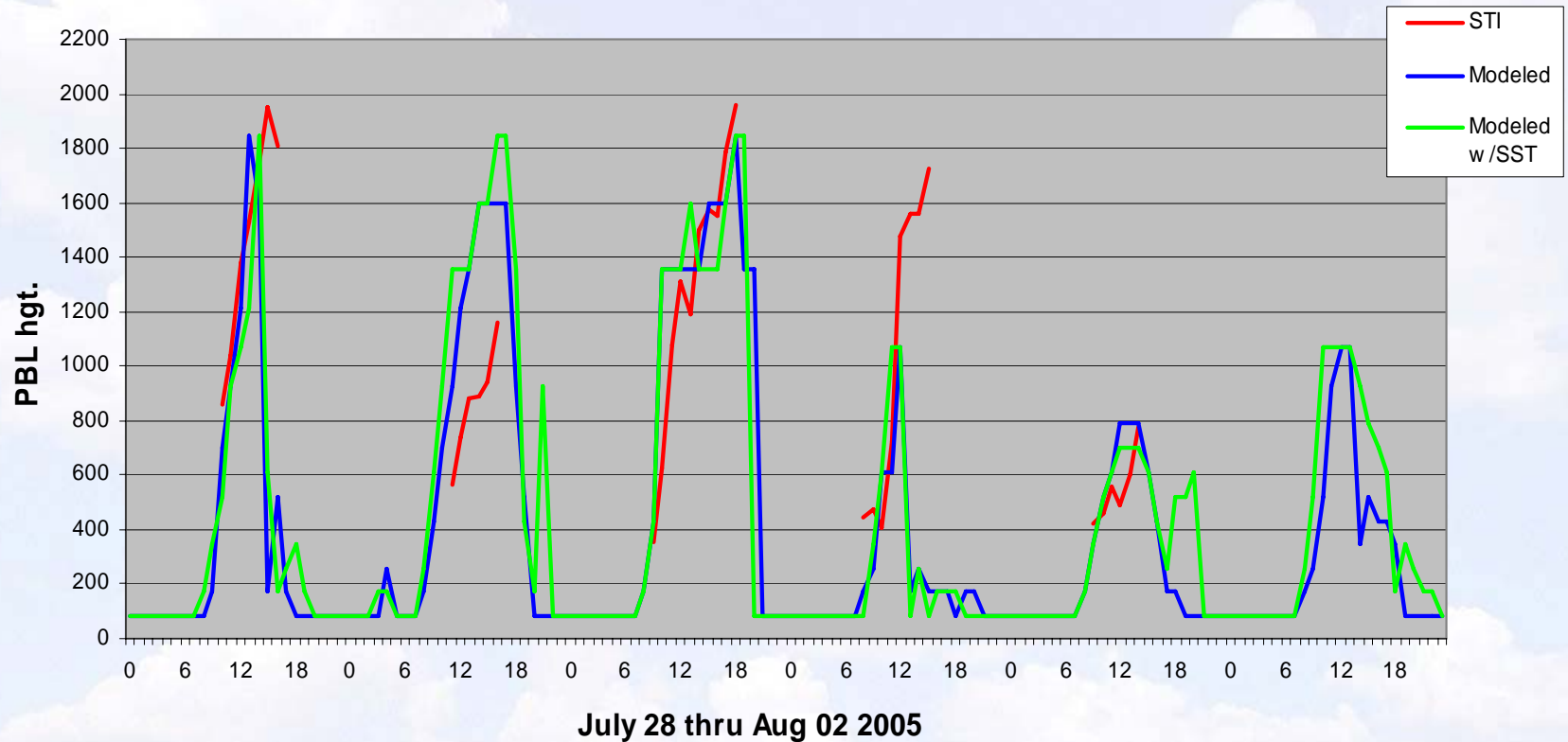


August 1, 2005 16:00:00
Min= 0.000 at (98,80), Max= 1.000 at (37,1)



2005ep2: PBL Time Series

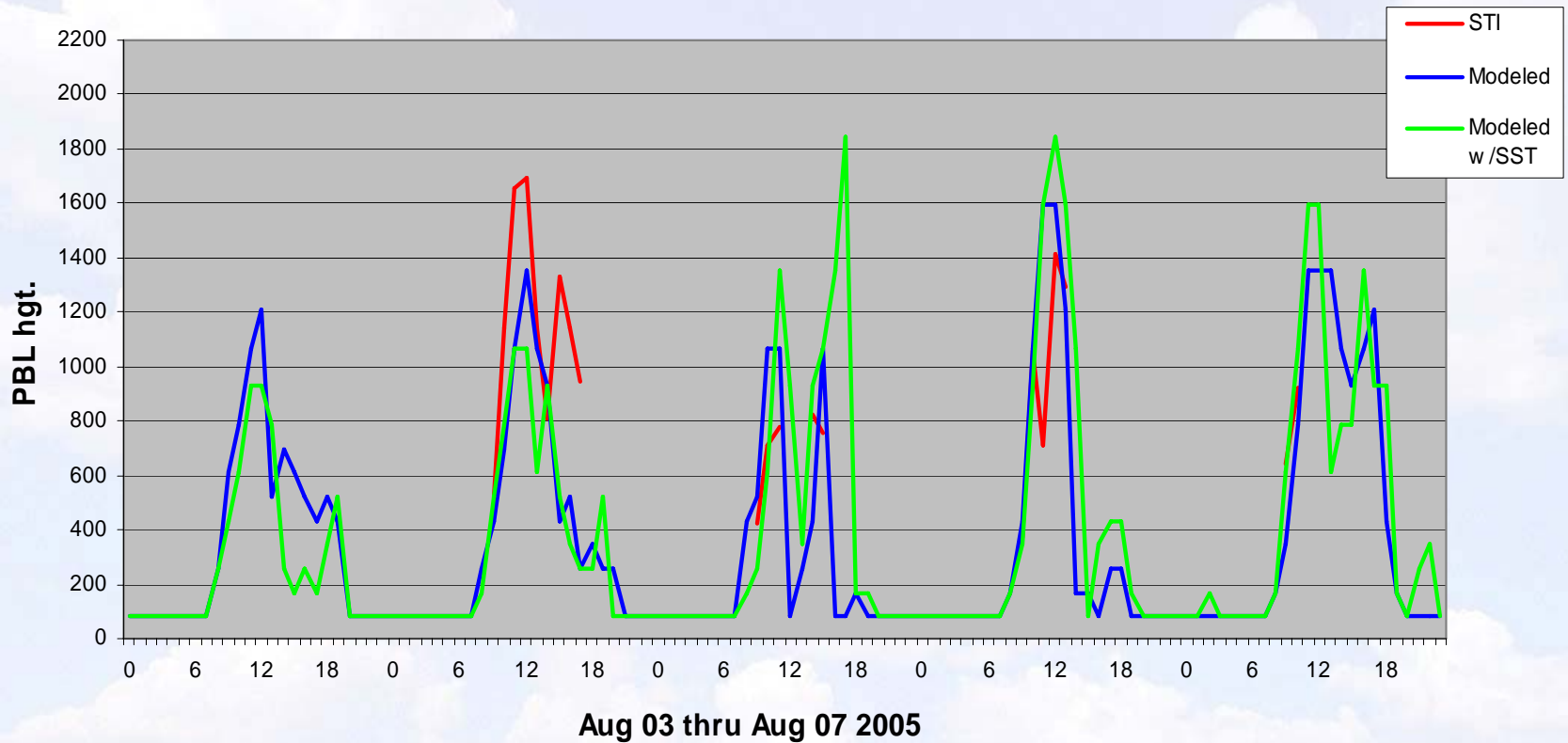
LaPorte





2005ep2: PBL Time Series

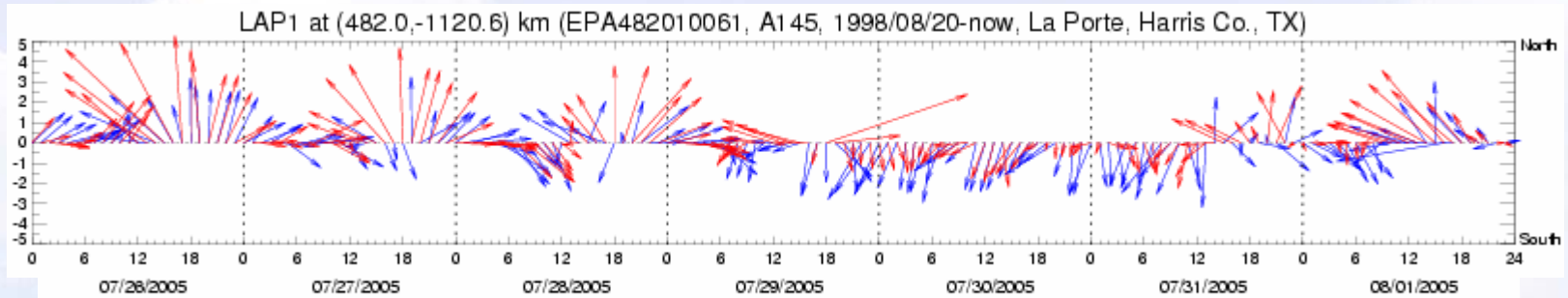
LaPorte



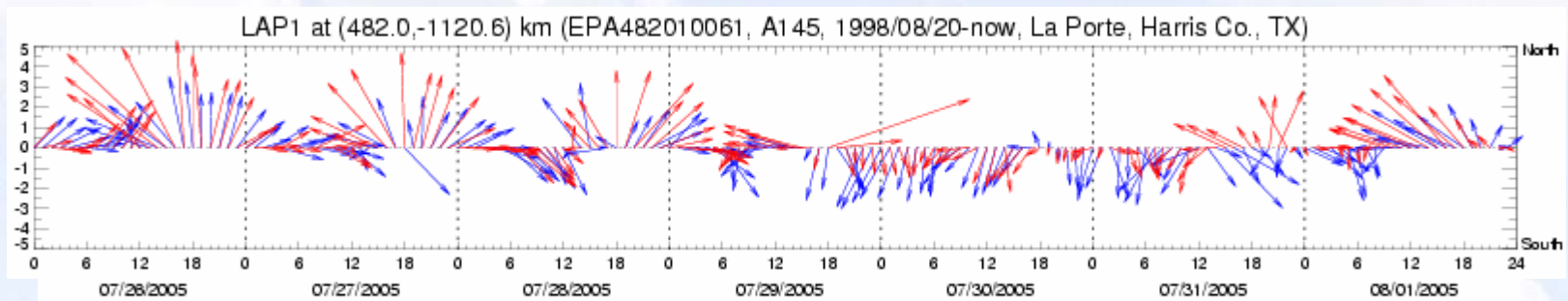


2005ep2: CAMx-ready Winds (w/ SST)

Original 2005ep2 FDDA run



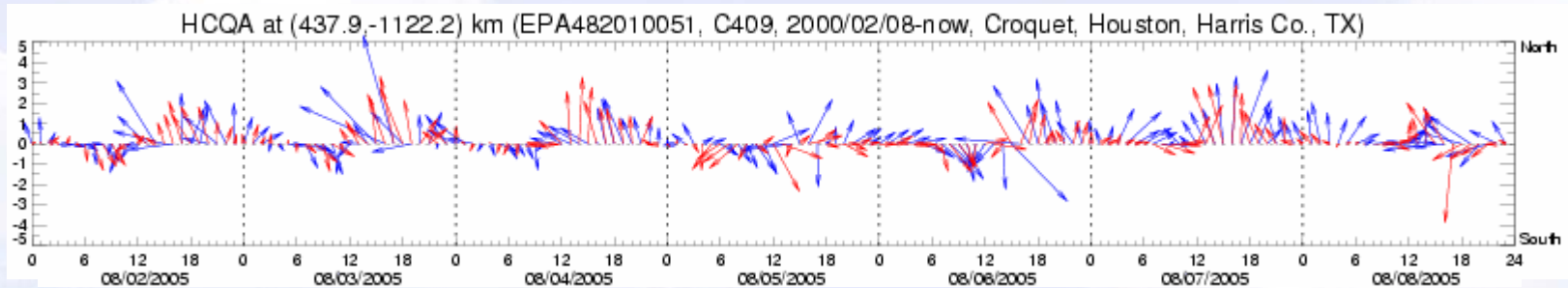
New 2005ep2 FDDA run w/ SST



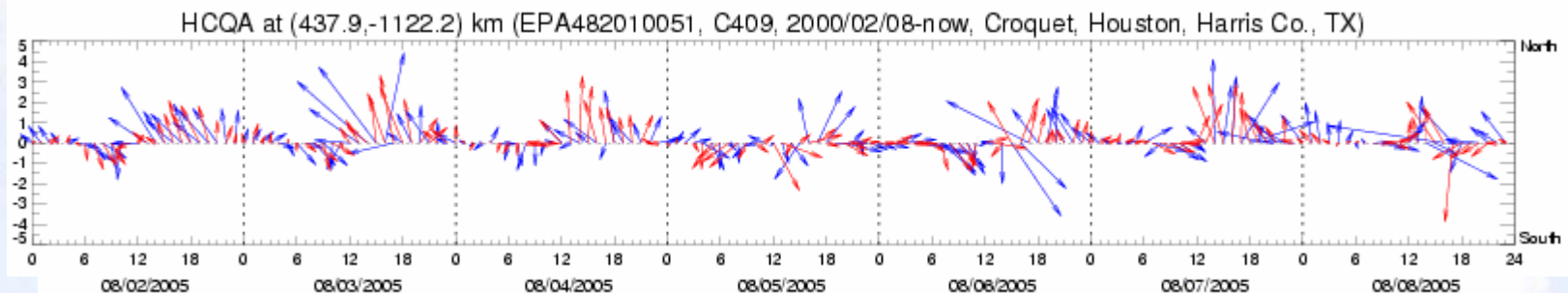


2005ep2: CAMx-ready Winds (w/ SST)

Original 2005ep2 FDDA run



New 2005ep2 FDDA run w/ SST

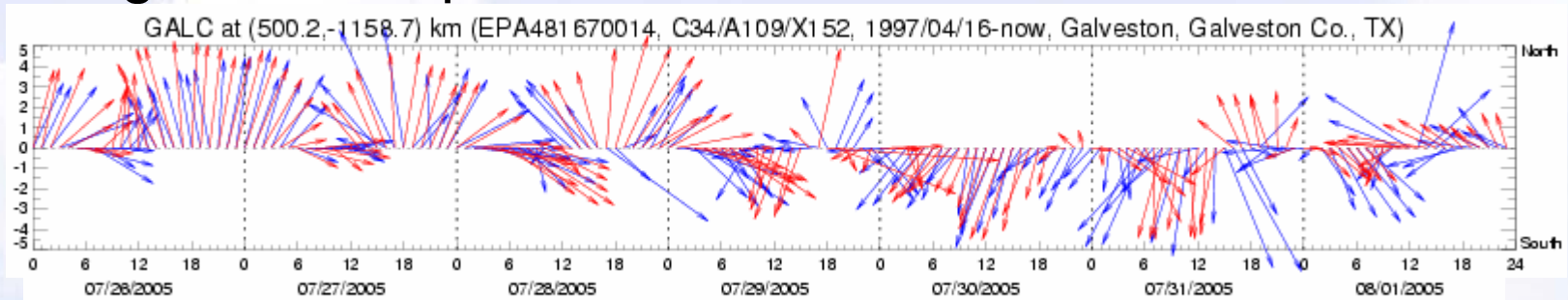


— CAMx/MM5 2005ep2_eta_dbemis_fdda
— Observed

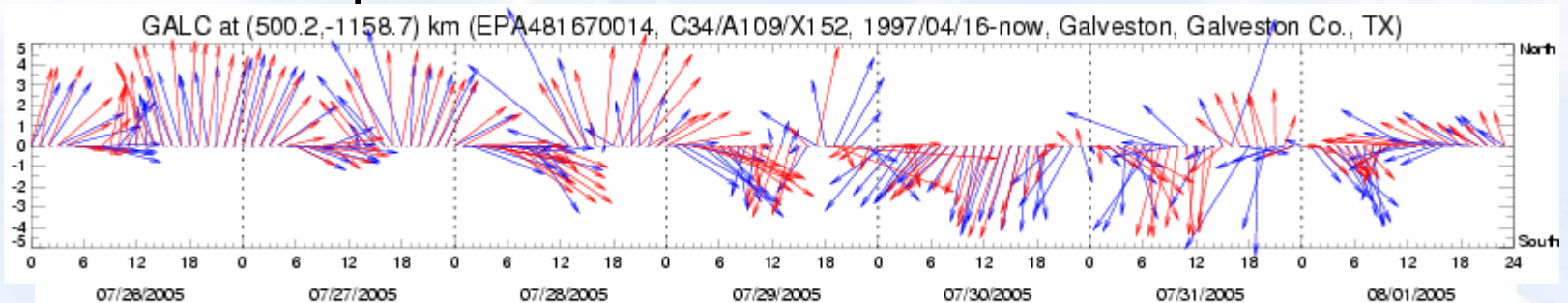


2005ep2: CAMx-ready Winds (w/ SST)

Original 2005ep2 FDDA run



New 2005ep2 FDDA run w/ SST

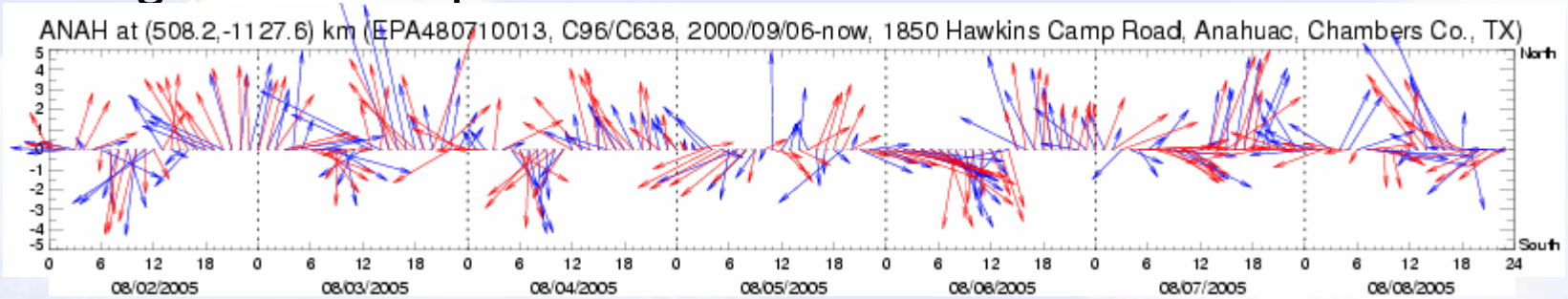


— CAMx/MM5 2005ep2_eta_dbemis_fdda
— Observed

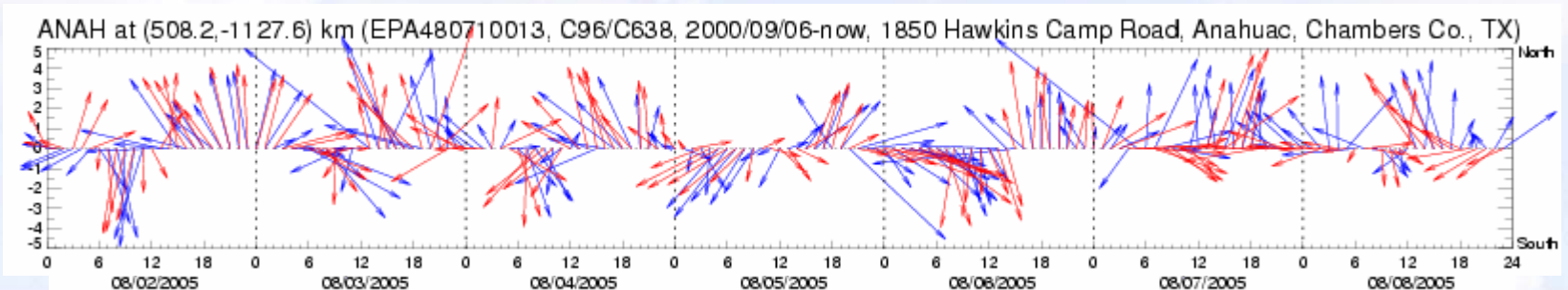


2005ep2: CAMx-ready Winds (w/ SST)

Original 2005ep2 FDDA run



New 2005ep2 FDDA run w/ SST



— CAMx/MM5 2005ep2_eta_dbemis_fdda
— Observed



Future Work

- Other Evaluation Tools
- Use of other physics schemes
- Update Land use
- Incorporate higher resolution Sea Surface Temps
- Complete the first May 2005 4km run
- Evaluate first CAMx runs