

DISCOVER-AQ OUTLOOK -- September 15, 2013

Today (Sunday): Hard-down day. The high AOD yesterday that was associated with agricultural fires in SE and SC US is much lower today as the plume pushes north of the area. SE Texas remains under the influence of an upper level ridge and under easterly flow. Moisture will stream into the region from Hurricane Ingrid, creating a deep moisture column. However, because of the subsidence associated with the upper ridge, chances of convection will remain low throughout most of SE Texas; best chances for thunderstorms/precipitation will be along the coast and over the coastal waters. Thick cirrus deck at ~20 kft and another deck of low level clouds at ~4-5 kft.

Tomorrow (Monday): Region remains under the influence of the upper ridge, as well as moisture from Ingrid. Conditions are not expected to change much from today into tomorrow. Thick cirrus deck at ~20 kft expected, an another deck at ~4-5 kft also expected.

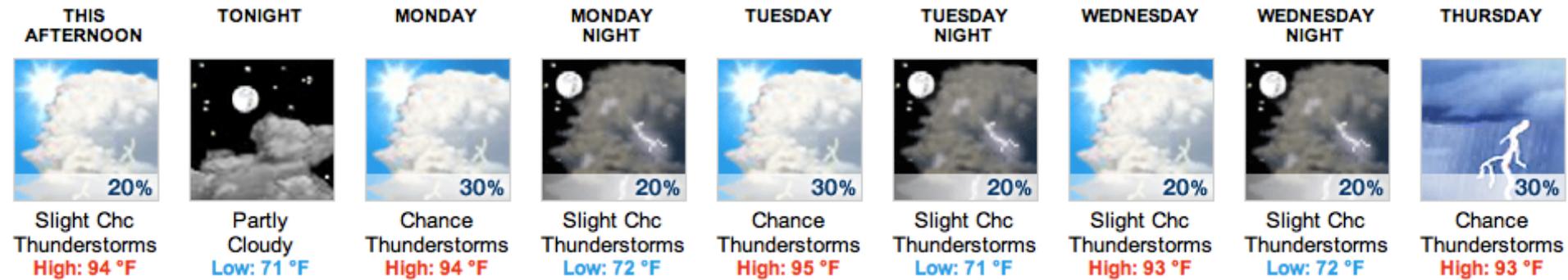
Tuesday & beyond: Similar conditions as are expected Monday should prevail on Tuesday. Lower level deck may dissipate. The thick cirrus deck may lessen from broken-overcast conditions to scattered conditions.

9/15/2013 Weather Briefing

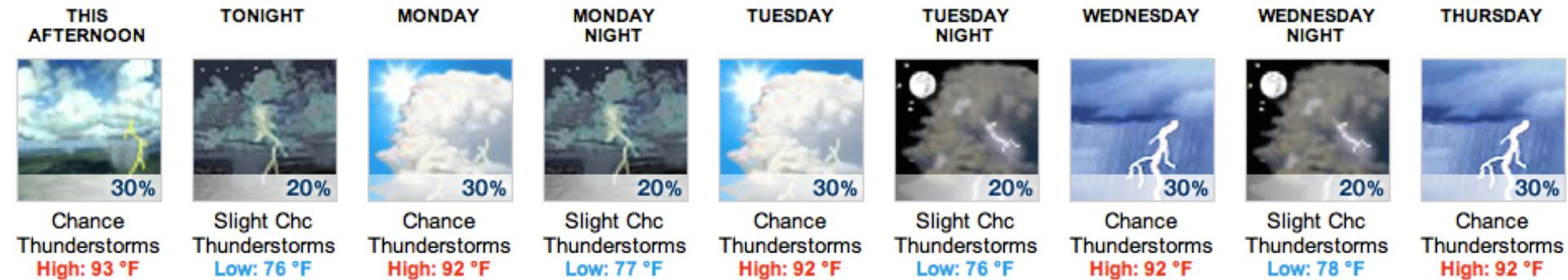
Clare Flynn

Ken Pickering

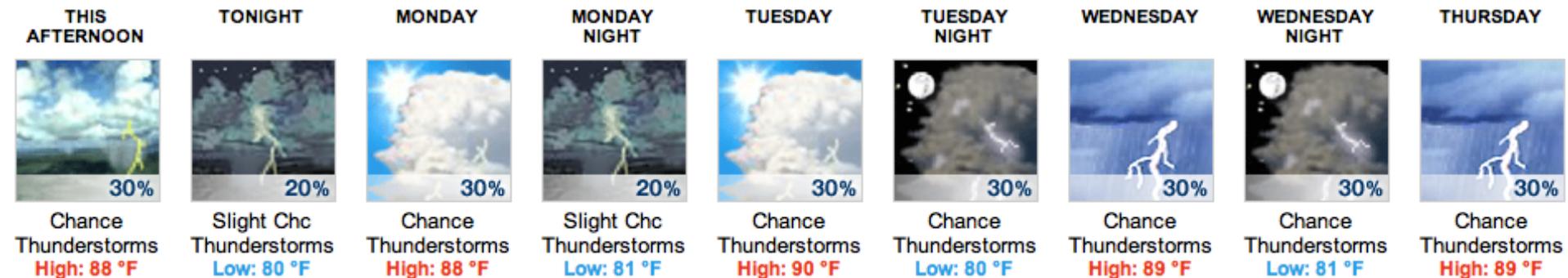
Conroe:



Houston Hobby:



Galveston:



Current Conditions

Conroe:



A Few Clouds
87°F
 31°C

Humidity 63%
 Wind Speed SE 10 mph
 Barometer 30.03 in (1016.3 mb)
 Dewpoint 73°F (23°C)
 Visibility 10.00 mi
 Heat Index 94°F (34°C)
 Last Update on 15 Sep 11:53 am CDT

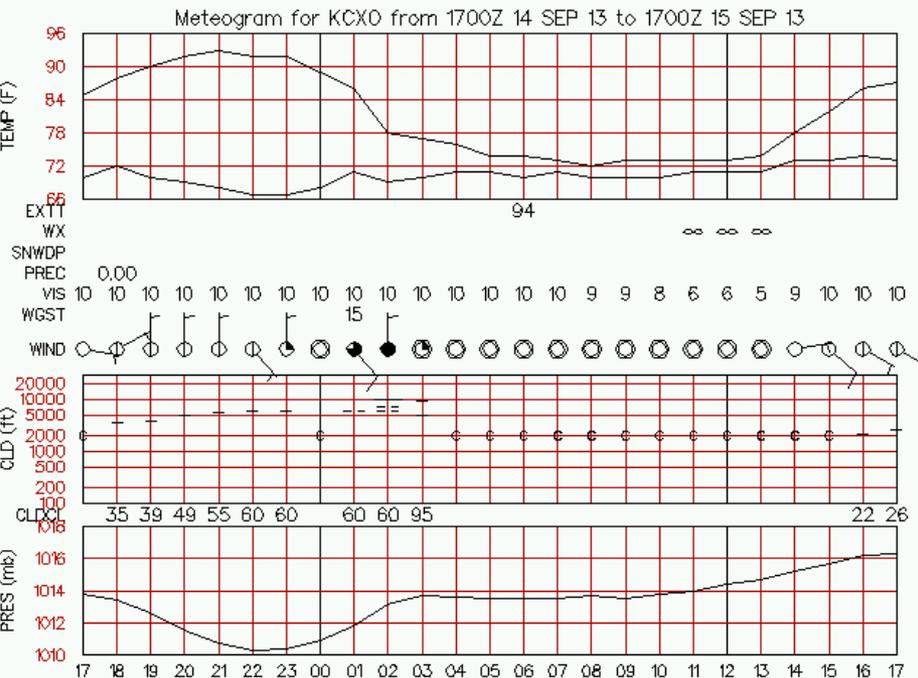
Houston Hobby:



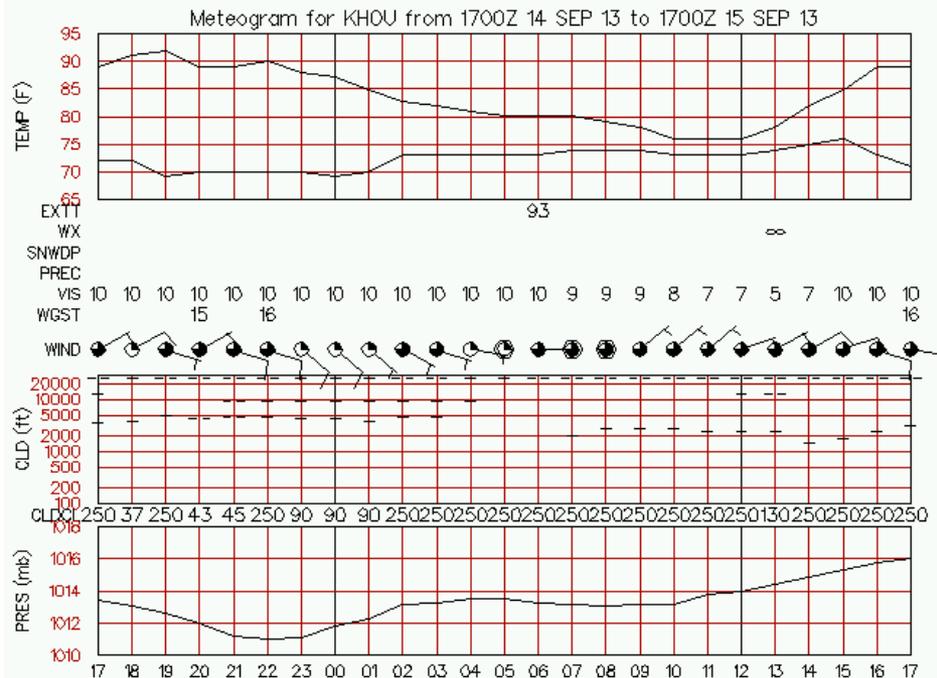
Mostly Cloudy
89°F
 32°C

Humidity 55%
 Wind Speed E 10 G 18 mph
 Barometer 29.99 in (1016.0 mb)
 Dewpoint 71°F (22°C)
 Visibility 10.00 mi
 Heat Index 95°F (35°C)
 Last Update on 15 Sep 11:53 am CDT

▼ Plymouth State Weather Center ▼



▼ Plymouth State Weather Center ▼



Current Conditions

Galveston:

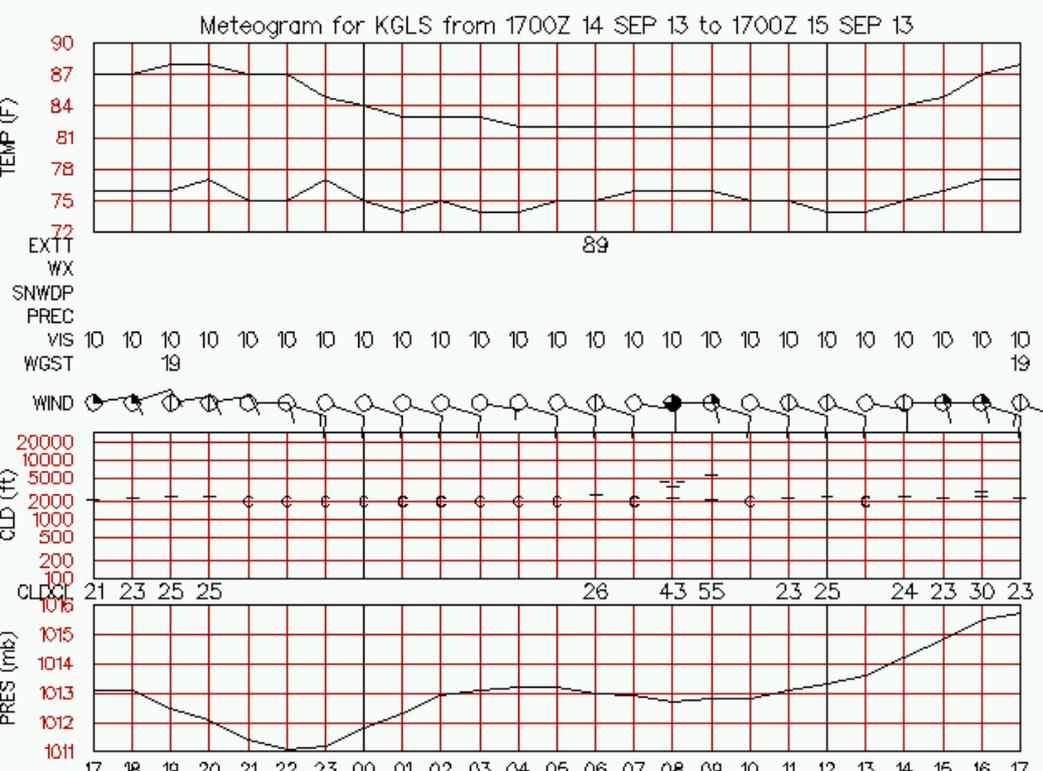


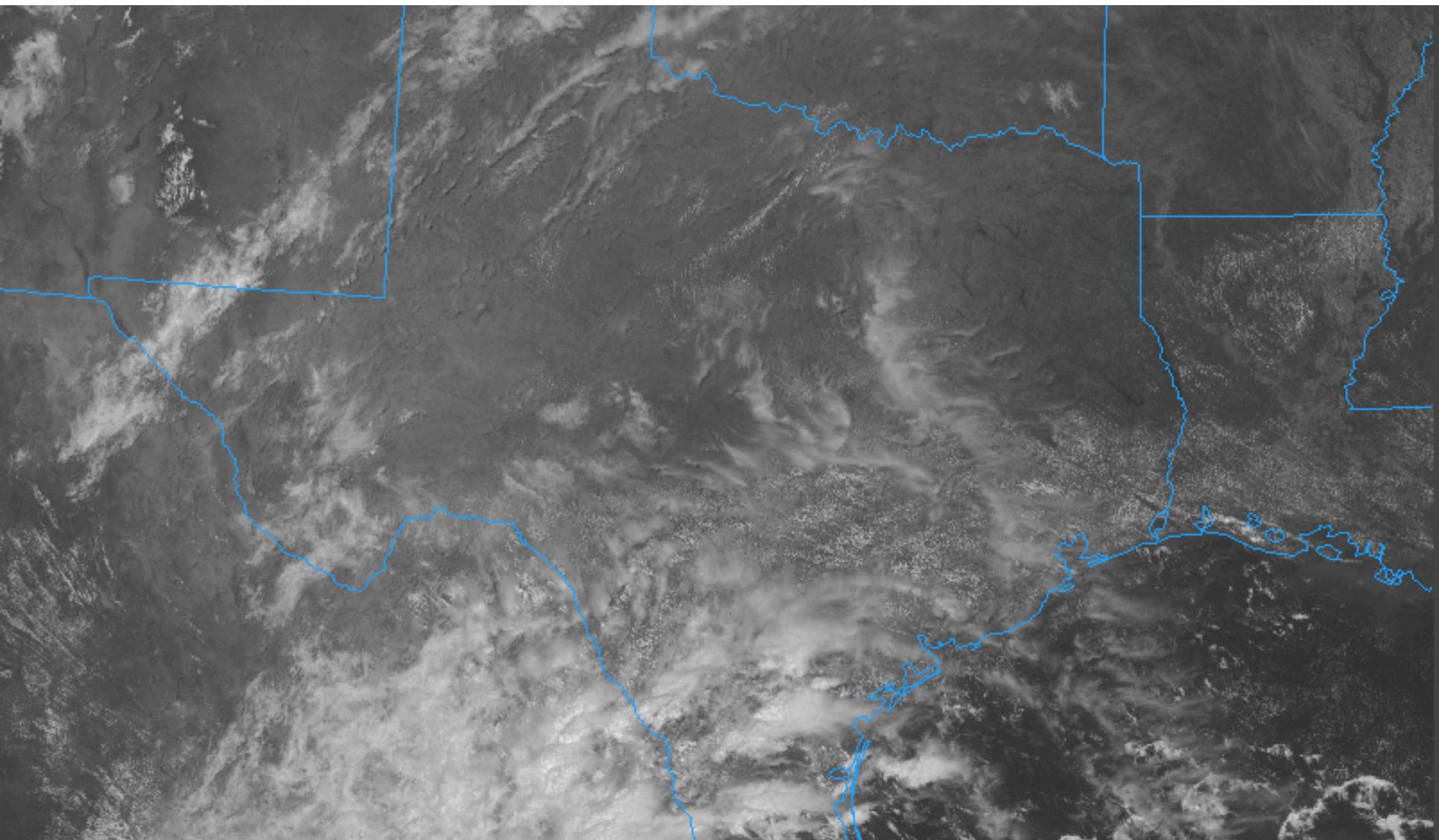
A Few Clouds
88°F
31°C

Humidity 70%
Wind Speed E 14 G 22 mph
Barometer 30.00 in (1015.7 mb)
Dewpoint 77°F (25°C)
Visibility 10.00 mi
Heat Index 100°F (38°C)

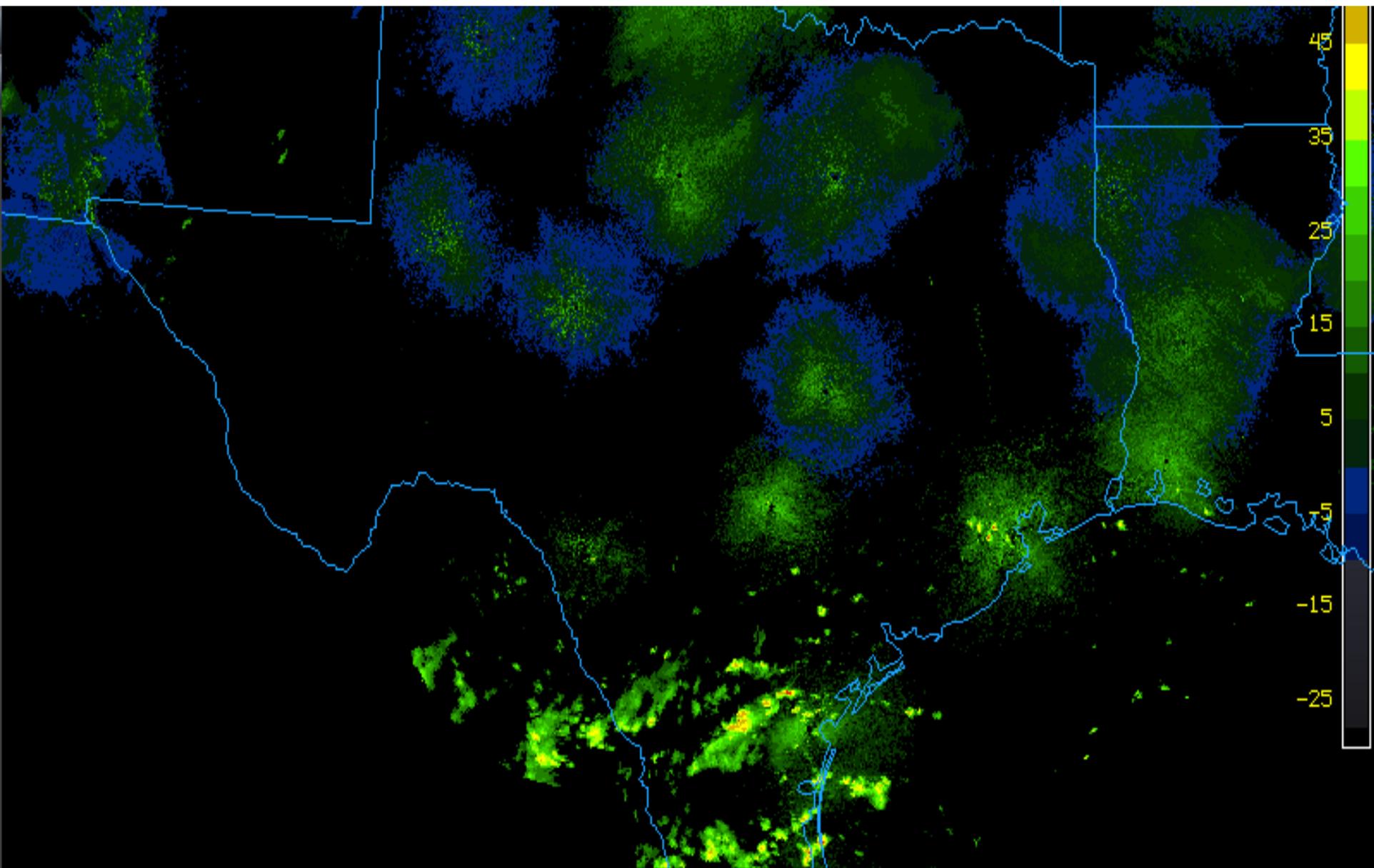
Last Update on 15 Sep 11:52 am CDT

▼ Plymouth State Weather Center ▼





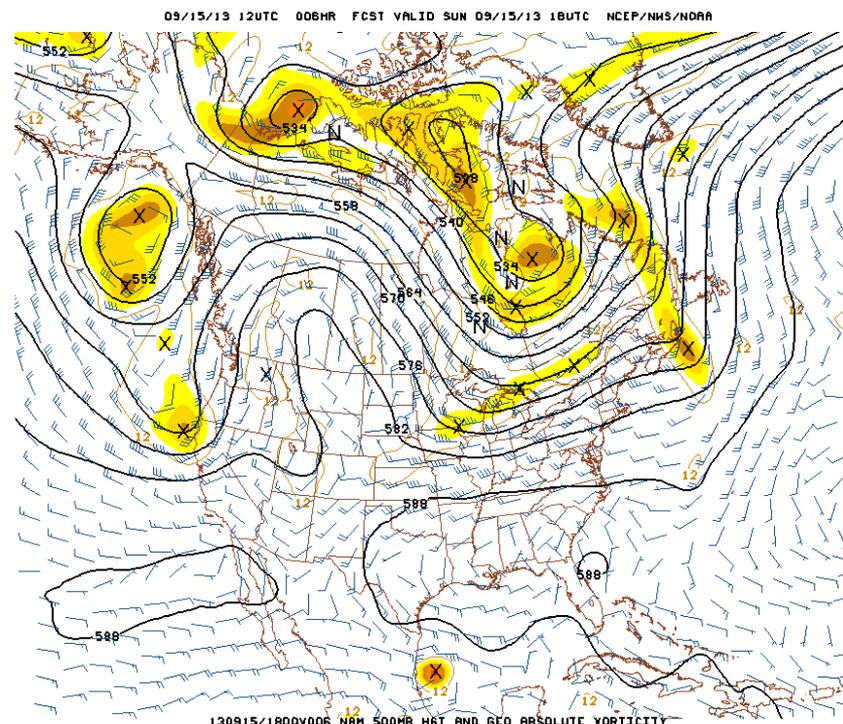
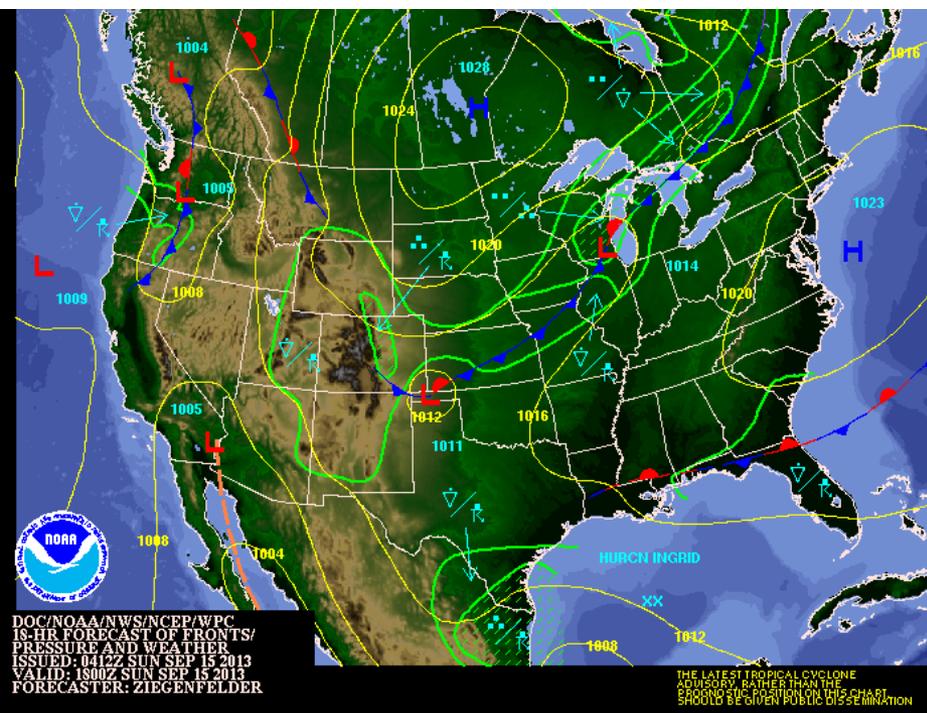
GOES VISIBLE SATELLITE 15 SEP 13 17:15



NEXRAD 1KM MOSAIC 15 SEP 13 17:20

Today: Easterly flow. Upper level ridge influences study region, and will expand over next few days. The sfc front will dissipate over today, preventing drier air from penetrating further in SE Texas.

1 PM CDT
500 mb vorticity



10 m winds at 1 PM today

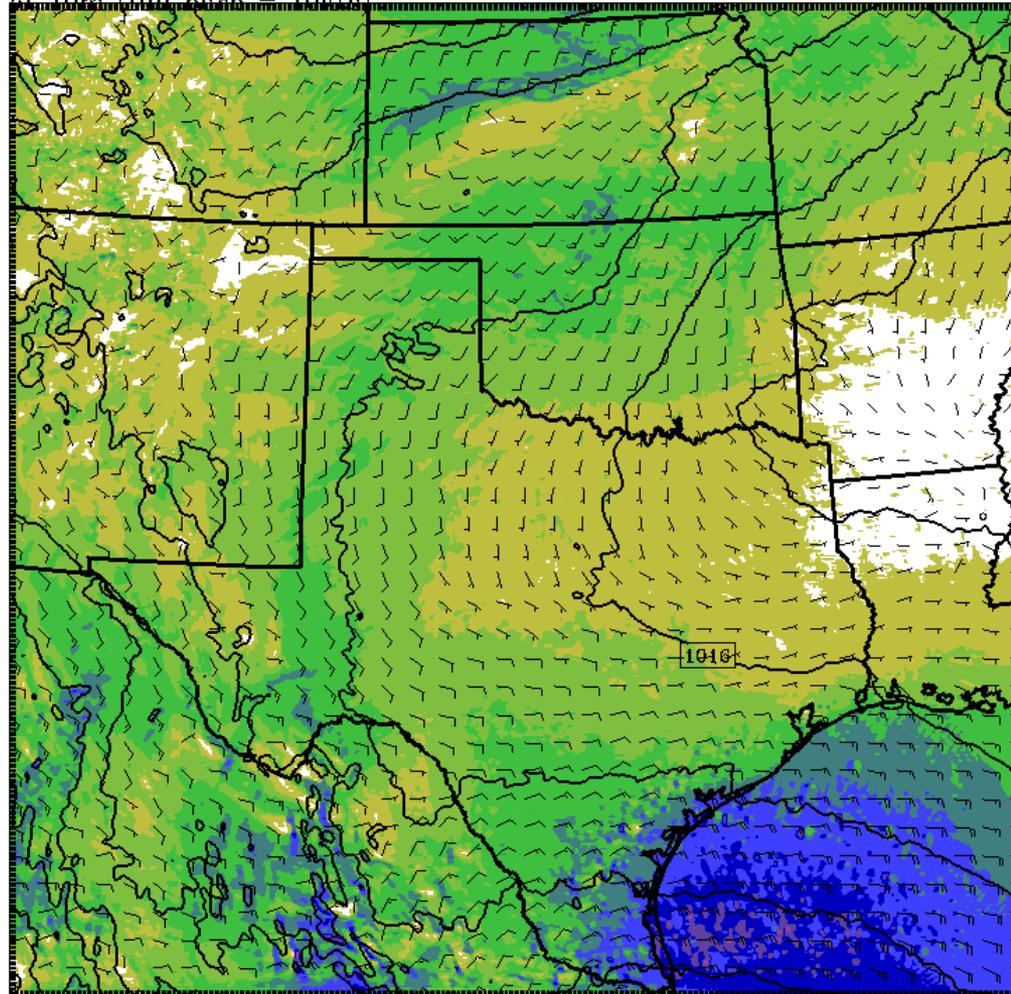
WRF 3-KM
Fest: 12 h

Init: 06 UTC Sun 15 Sep 13
Valid: 18 UTC Sun 15 Sep 13 (13 CDT Sun 15 Sep 13)

Sigma1 Windspeed (m/s)
Sea Level Pressure (hPa)
Wind at 10m (full barb = 10kts)

100 W

90 W



30 N

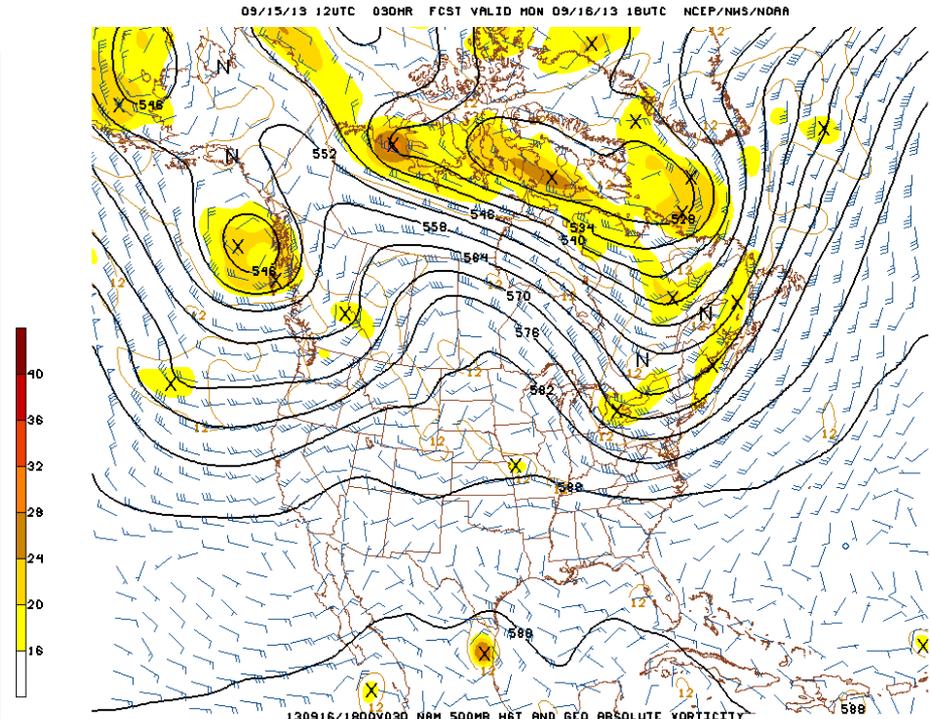
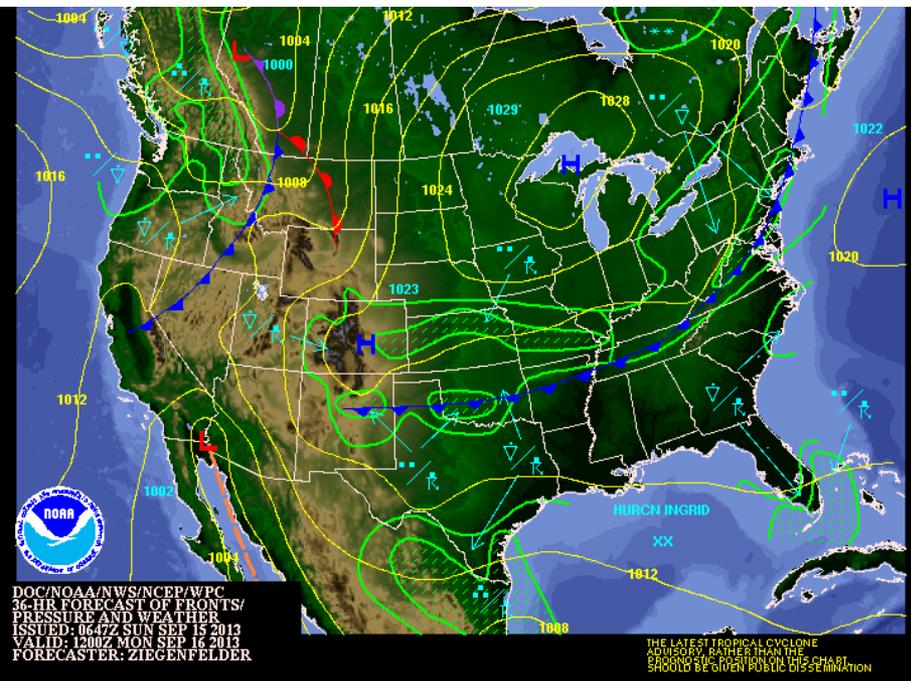
CONTOURS: UNITS=hPa LOW= 1002.0 HIGH= 1018.0 INTERVAL= 2.0000



Model Info: V3.3 No Cu YSU PBL Thompson Noah LSM 3.0 km, 37 levels, 18 sec
LW: RRTM SW: Dudhia DIFF: simple KM: 2D Smagor

Tomorrow: Easterly flow. Region remains under influence of the upper ridge. Moisture will continue to stream into region from Ingrid; will have to fight the subsidence for any convection to occur. Thick cirrus deck likely, as well as lower level clouds.

1 PM CDT
500 mb vorticity



10 m winds at 1 PM tomorrow

WRF 3-KM

Fcst: 36 h

Sigma1 Windspeed (m/s)

Sea Level Pressure (hPa)

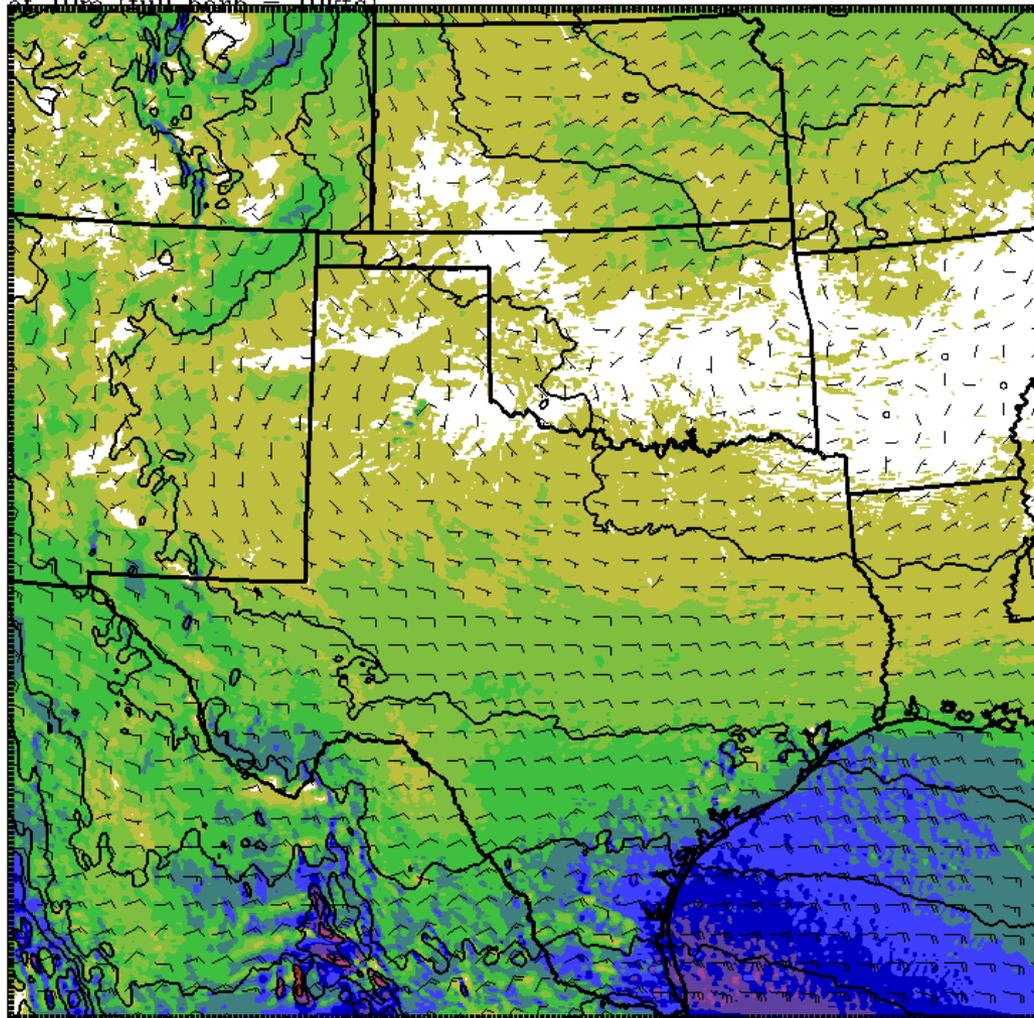
Wind at 10m (full barb = 10kts)

Init: 06 UTC Sun 15 Sep 13

Valid: 18 UTC Mon 16 Sep 13 (13 CDT Mon 16 Sep 13)

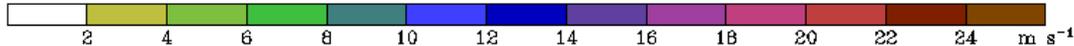
100 W

90 W



30 N

CONTOURS: UNITS=hPa LOW= 1002.0 HIGH= 1024.0 INTERVAL= 2.0000



Model Info: V3.3 No Cu YSU PBL Thompson Noah LSM 3.0 km, 37 levels, 18 sec
LW: RRTM SW: Dudhia DIFF: simple KM: 2D Smagor

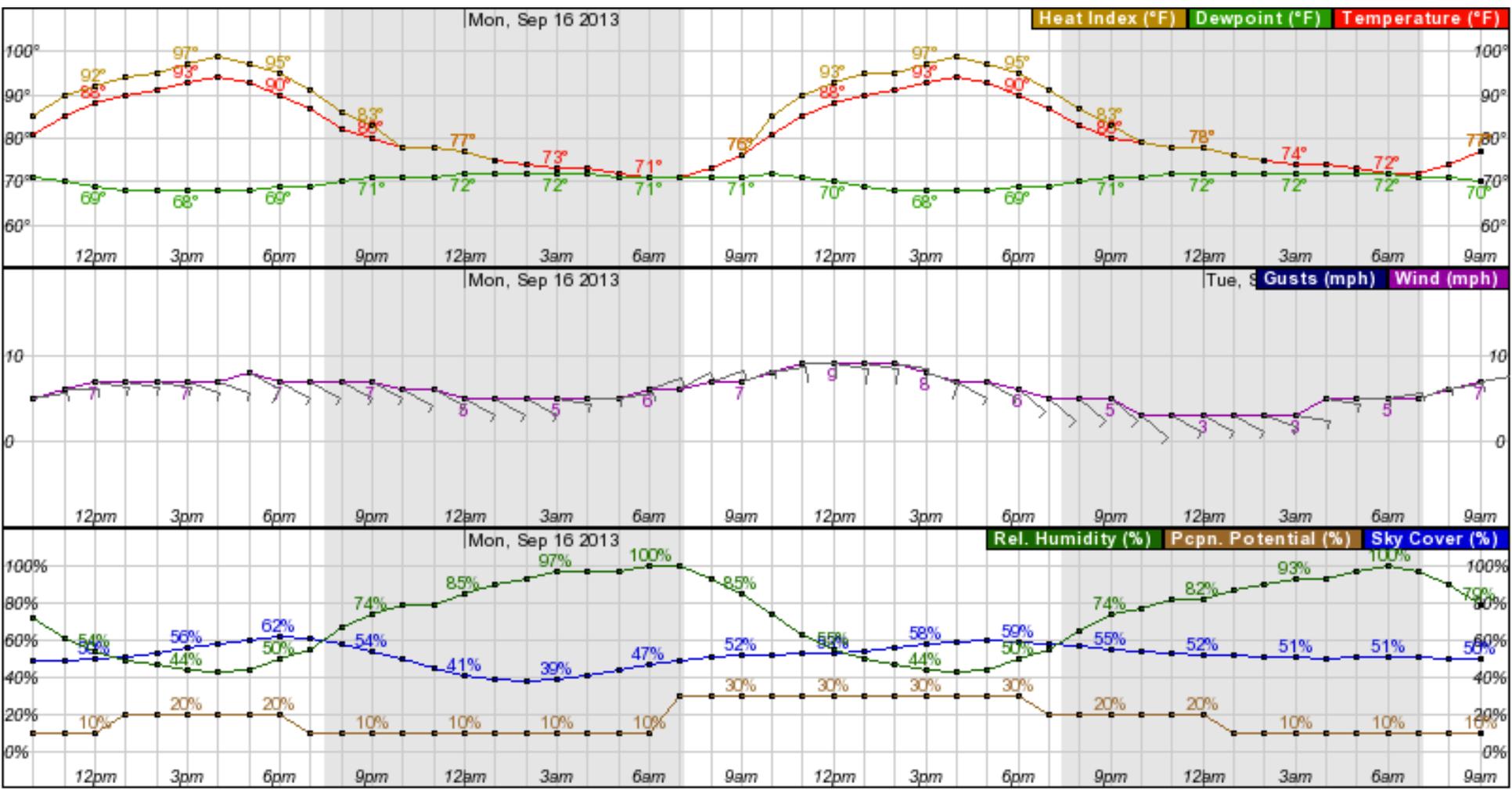
Conroe

Today: Partly cloudy

Tomorrow: Partly cloudy

Today →

Tomorrow →



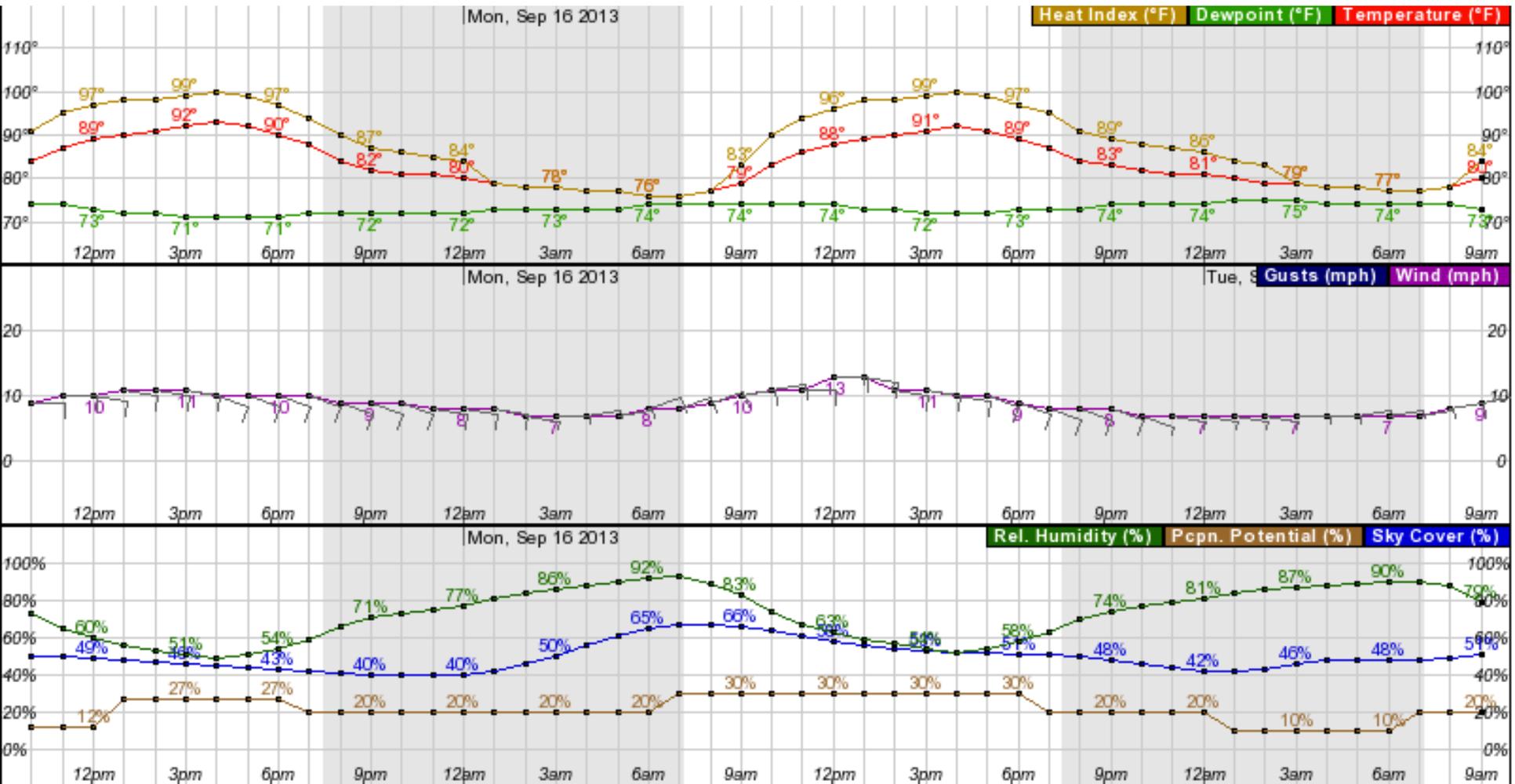
Houston Hobby

Today: Partly cloudy

Tomorrow: Partly cloudy

Today →

Tomorrow →



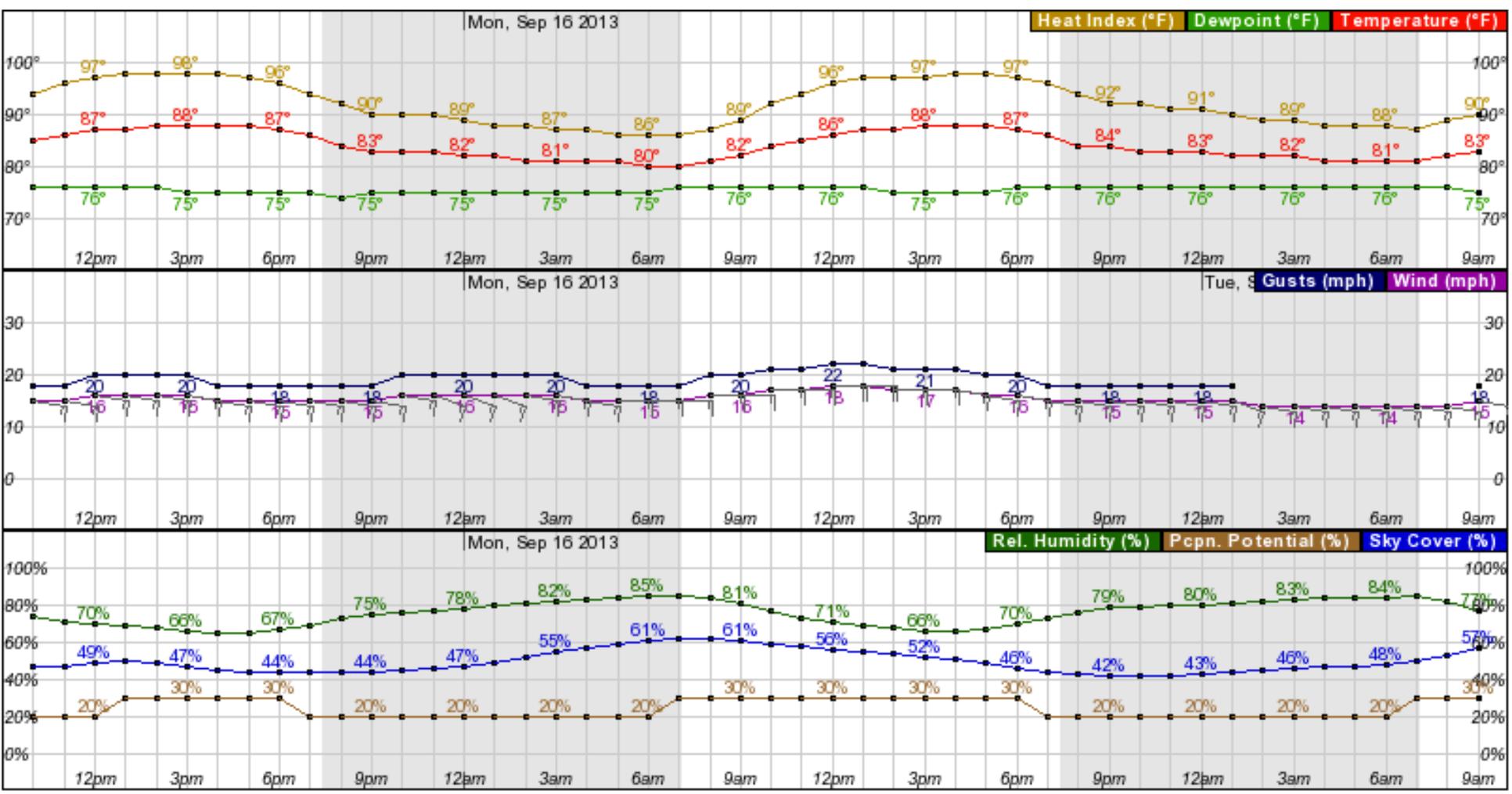
Galveston

Today: Partly cloudy

Tomorrow: Partly cloudy

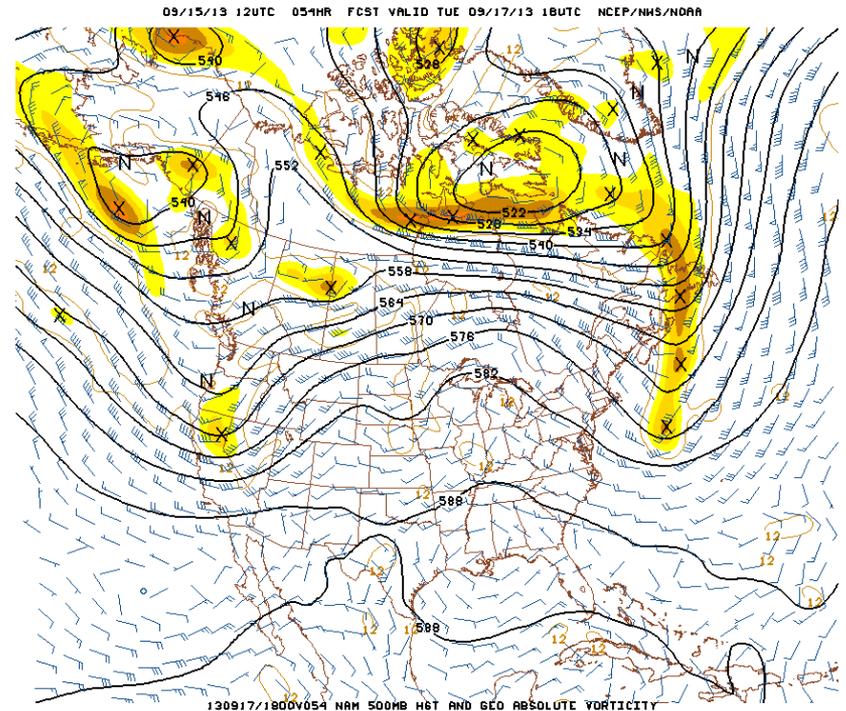
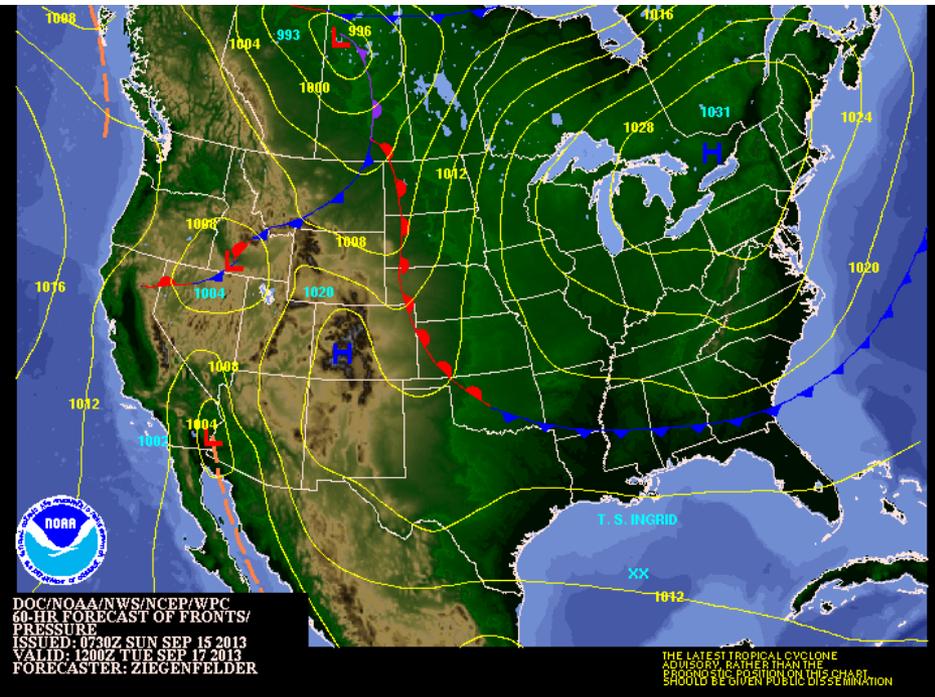
Today →

Tomorrow →



Tuesday: Similar situation to Monday; perhaps somewhat less cirrus.

1 PM CDT
500 mb vorticity



10 m winds at 1 PM Tuesday

WRF 3-KM

Fcst: 60 h

Sigma1 Windspeed (m/s)

Sea Level Pressure (hPa)

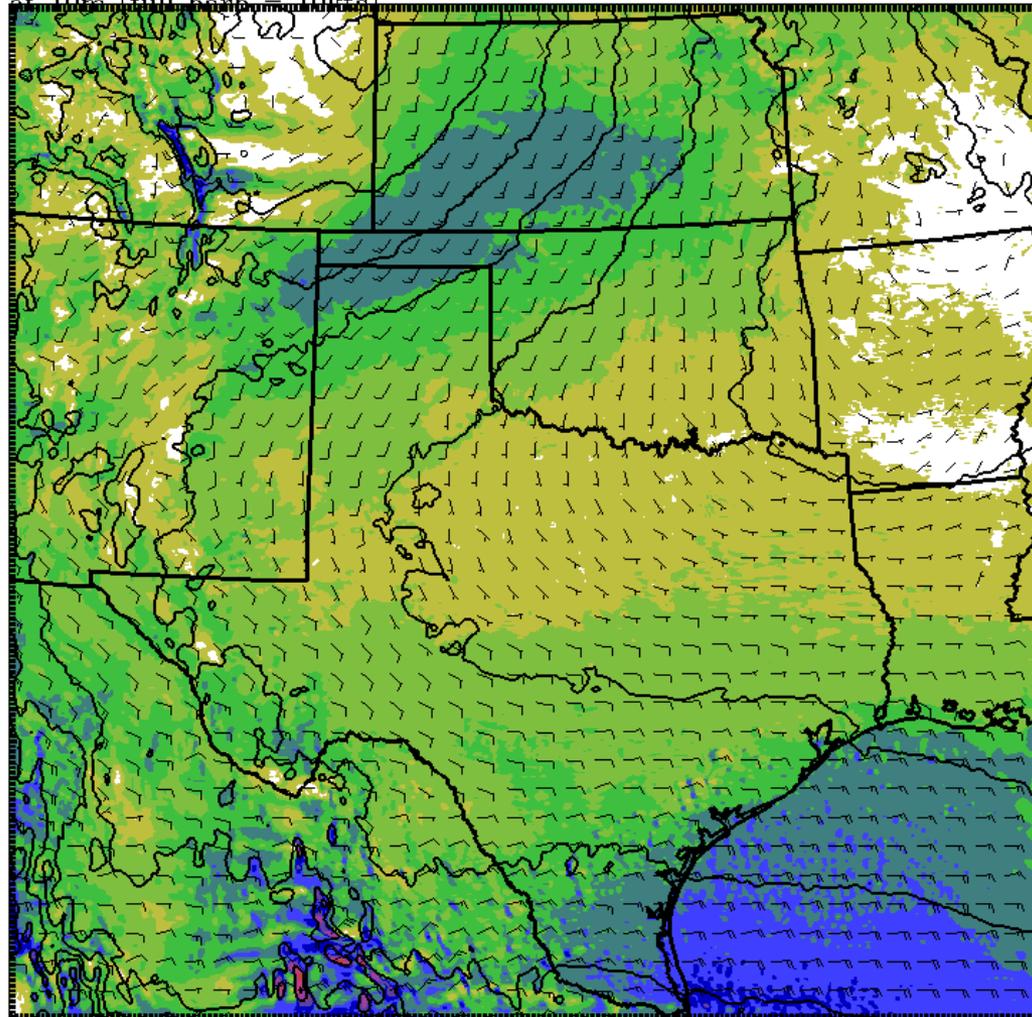
Wind at 10m (full barb = 10kts)

Init: 06 UTC Sun 15 Sep 13

Valid: 18 UTC Tue 17 Sep 13 (13 CDT Tue 17 Sep 13)

100 W

90 W



30 N

CONTOURS: UNITS=hPa LOW= 1002.0 HIGH= 1020.0 INTERVAL= 2.0000

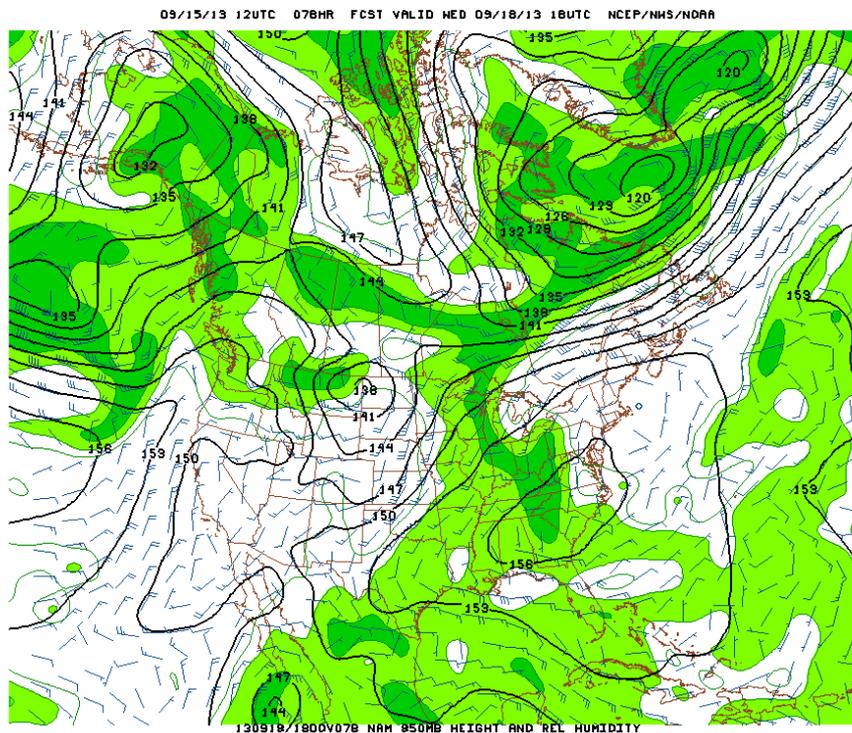


Model Info: V3.3

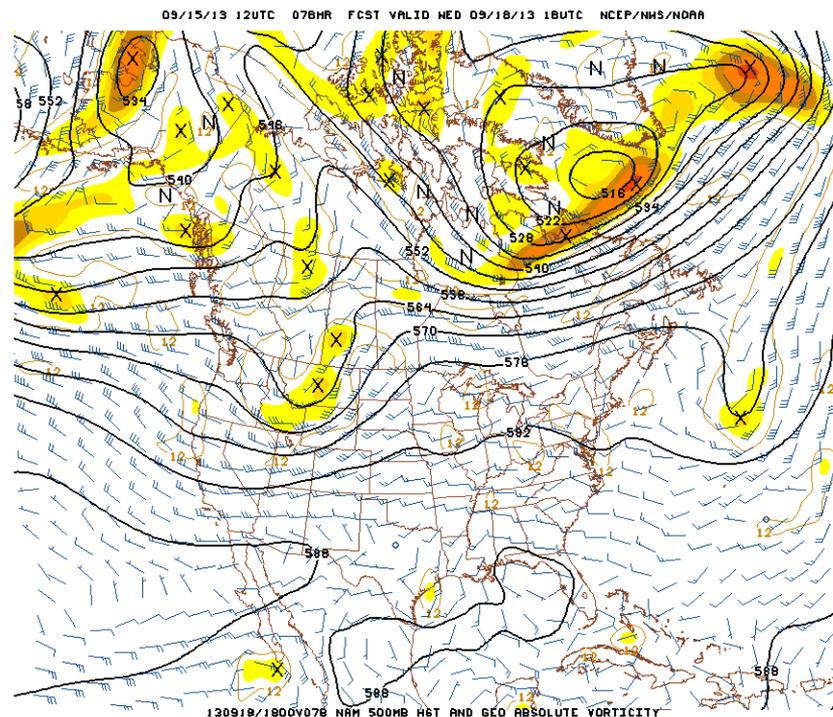
No Cu YSU PBL Thompson Noah LSM 3.0 km, 37 levels, 18 sec
LW: RRTM SW: Dudhia DIFF: simple KM: 2D Smagor

Wednesday: Upper ridge moves to our east as an upper trough begins to build. Moisture remains in the study region. Possibility for clouds and convection continues.

1 PM CDT
850 mb RH



500 mb vorticity



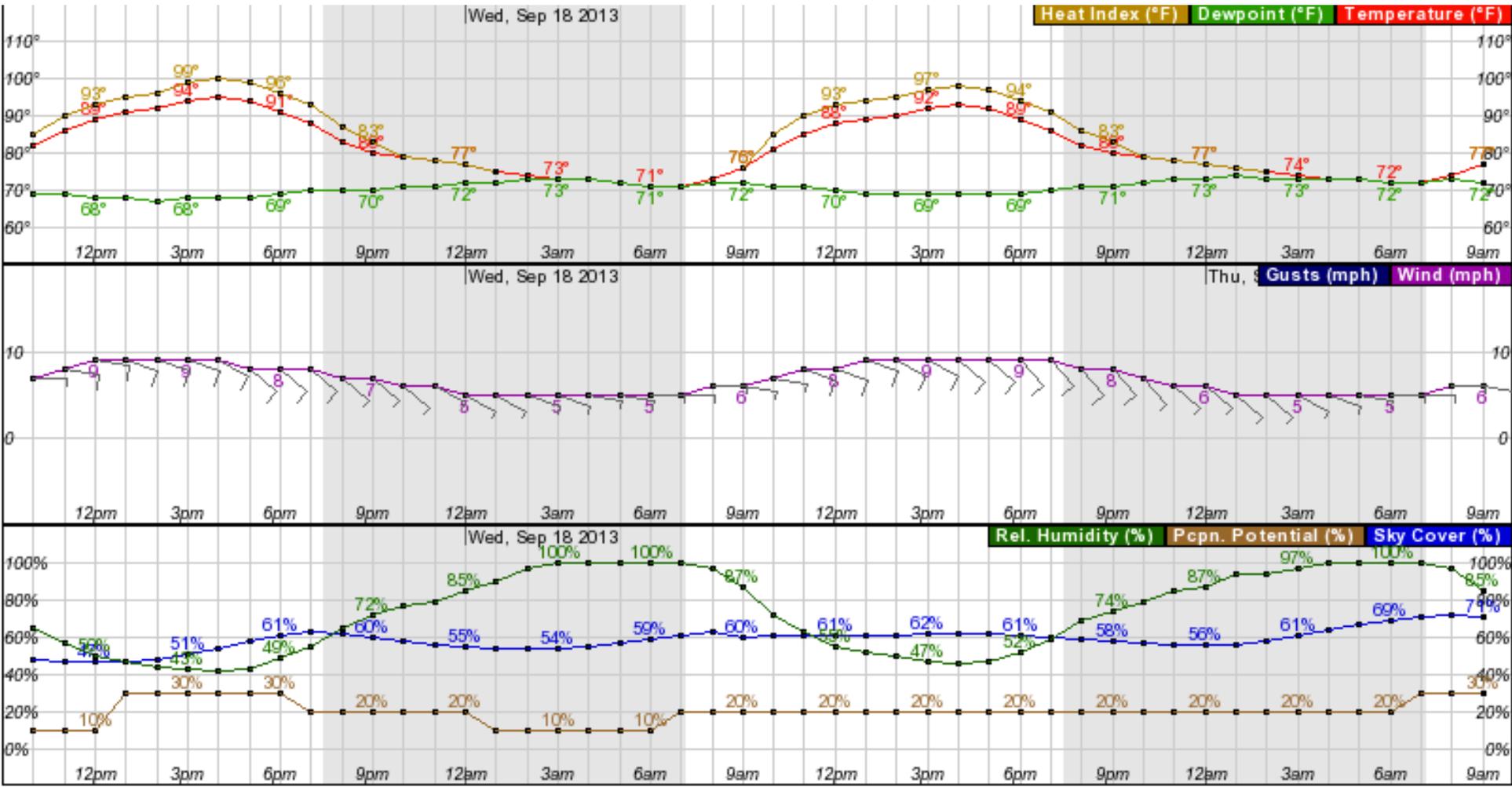
Conroe

Tuesday: Partly cloudy

Wednesday: Partly cloudy

Tuesday →

Wednesday →



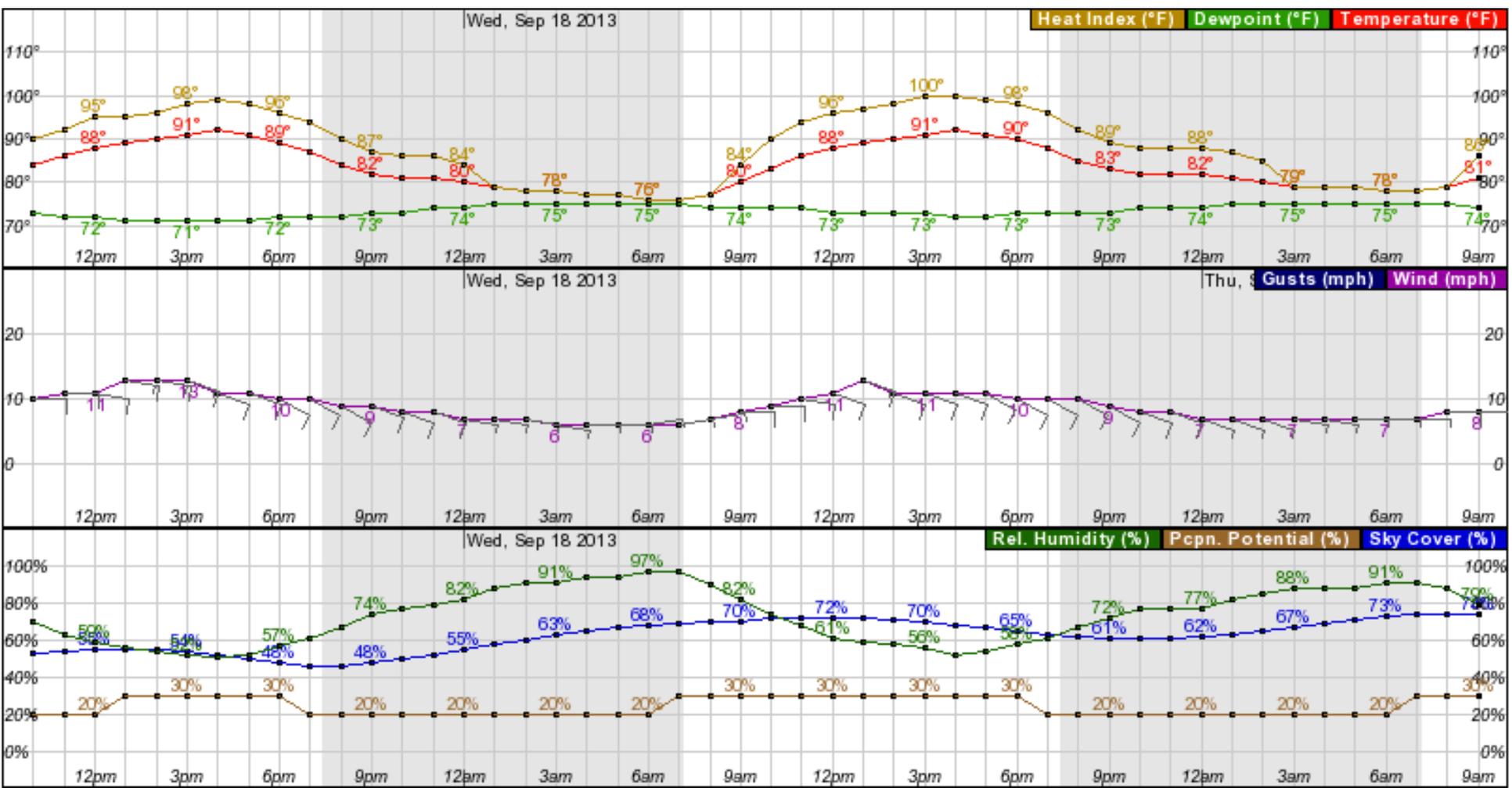
Houston Hobby

Tuesday: Partly cloudy

Wednesday: Mostly cloudy

Tuesday →

Wednesday →



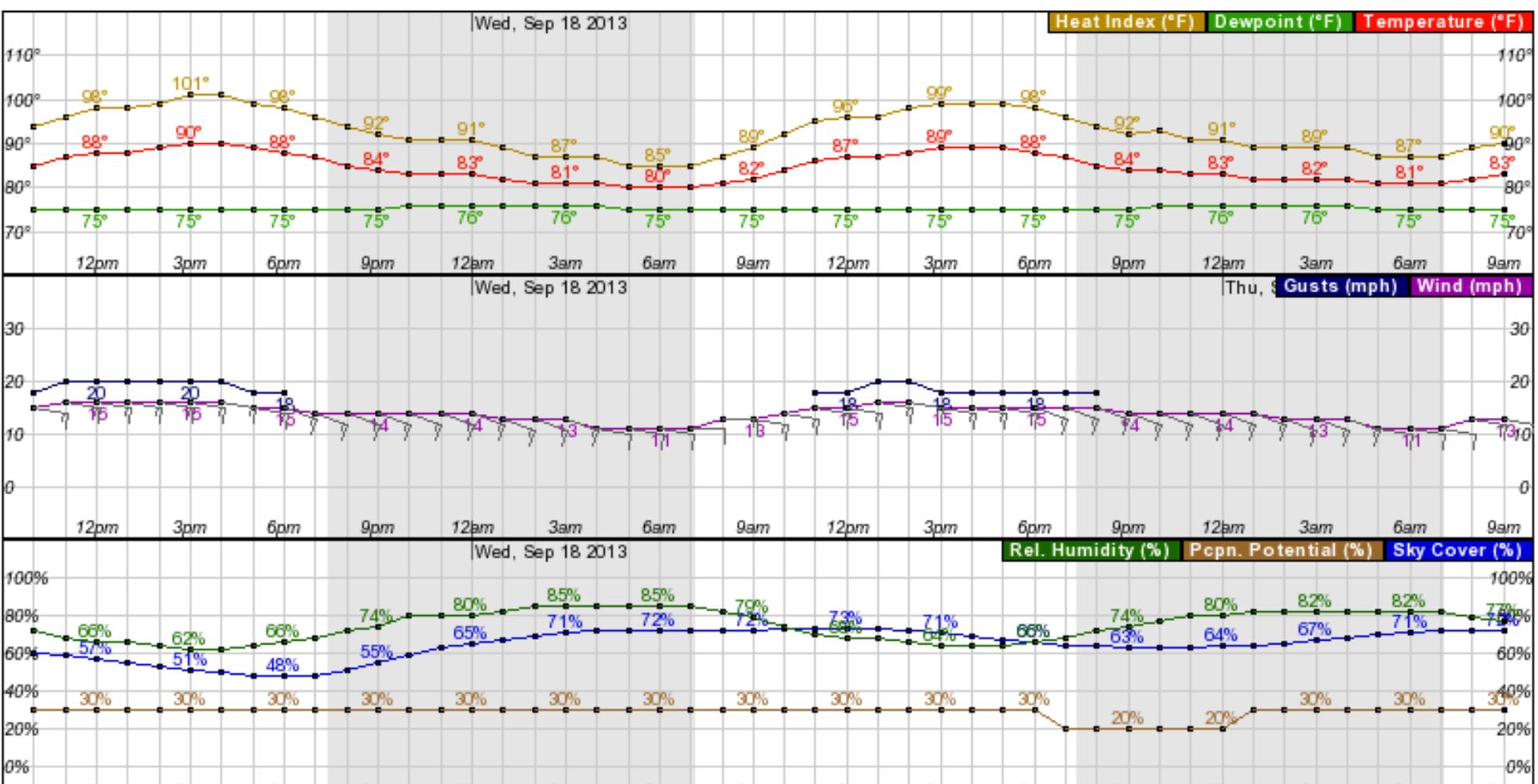
Galveston

Tuesday: Partly cloudy

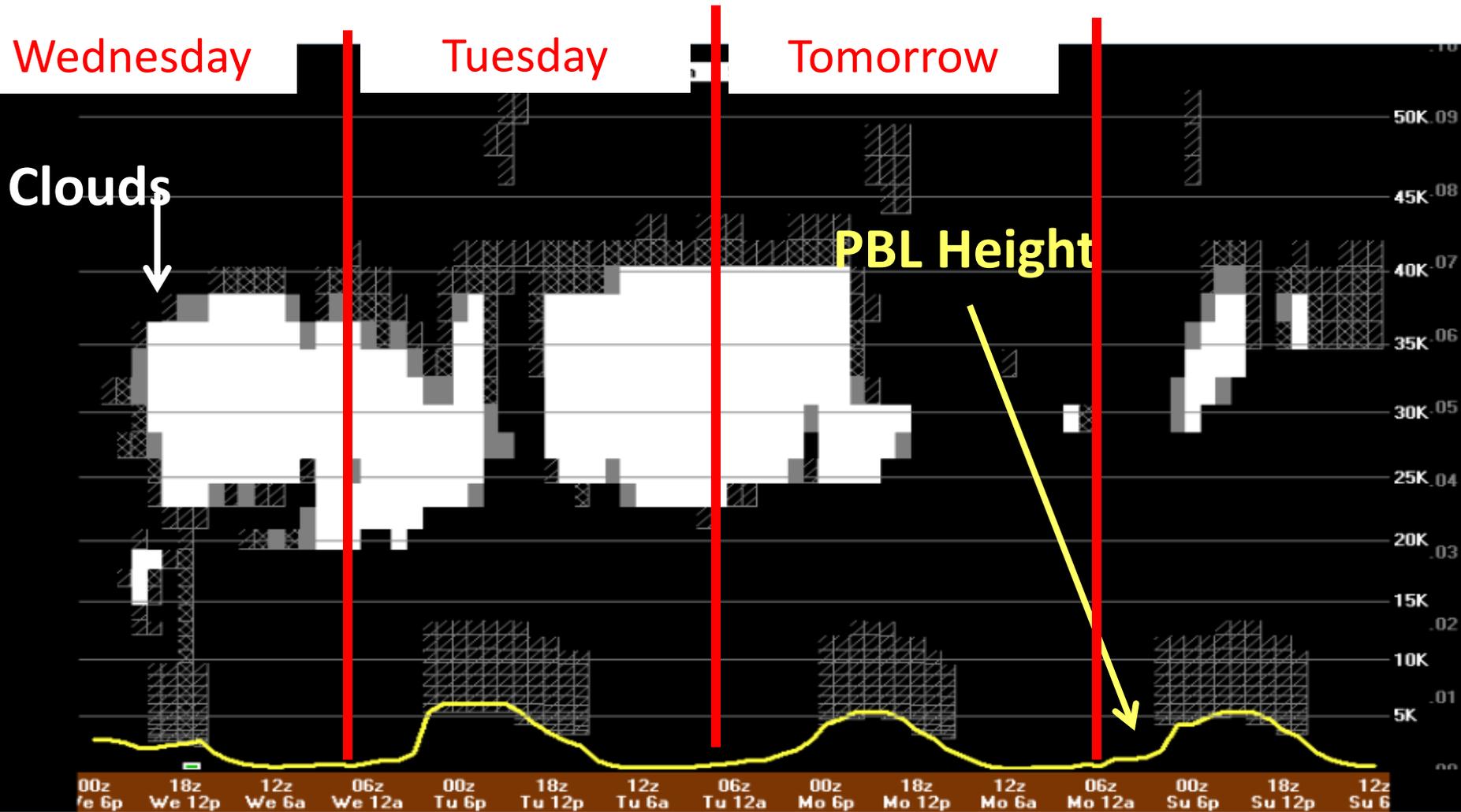
Wednesday: Mostly cloudy

Tuesday →

Wednesday →

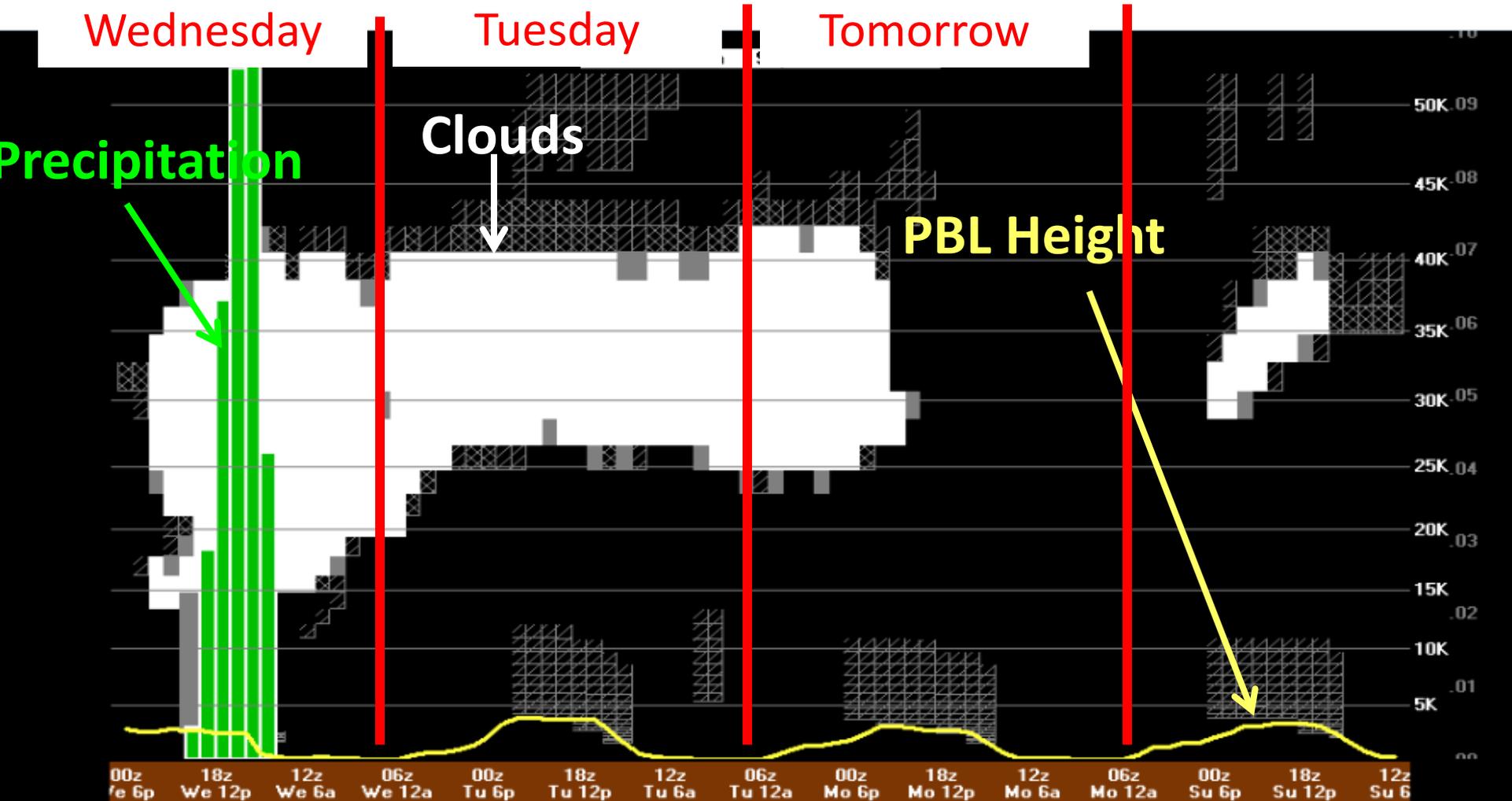


Conroe; BUFKIT – NAM (12 UTC 10 September)



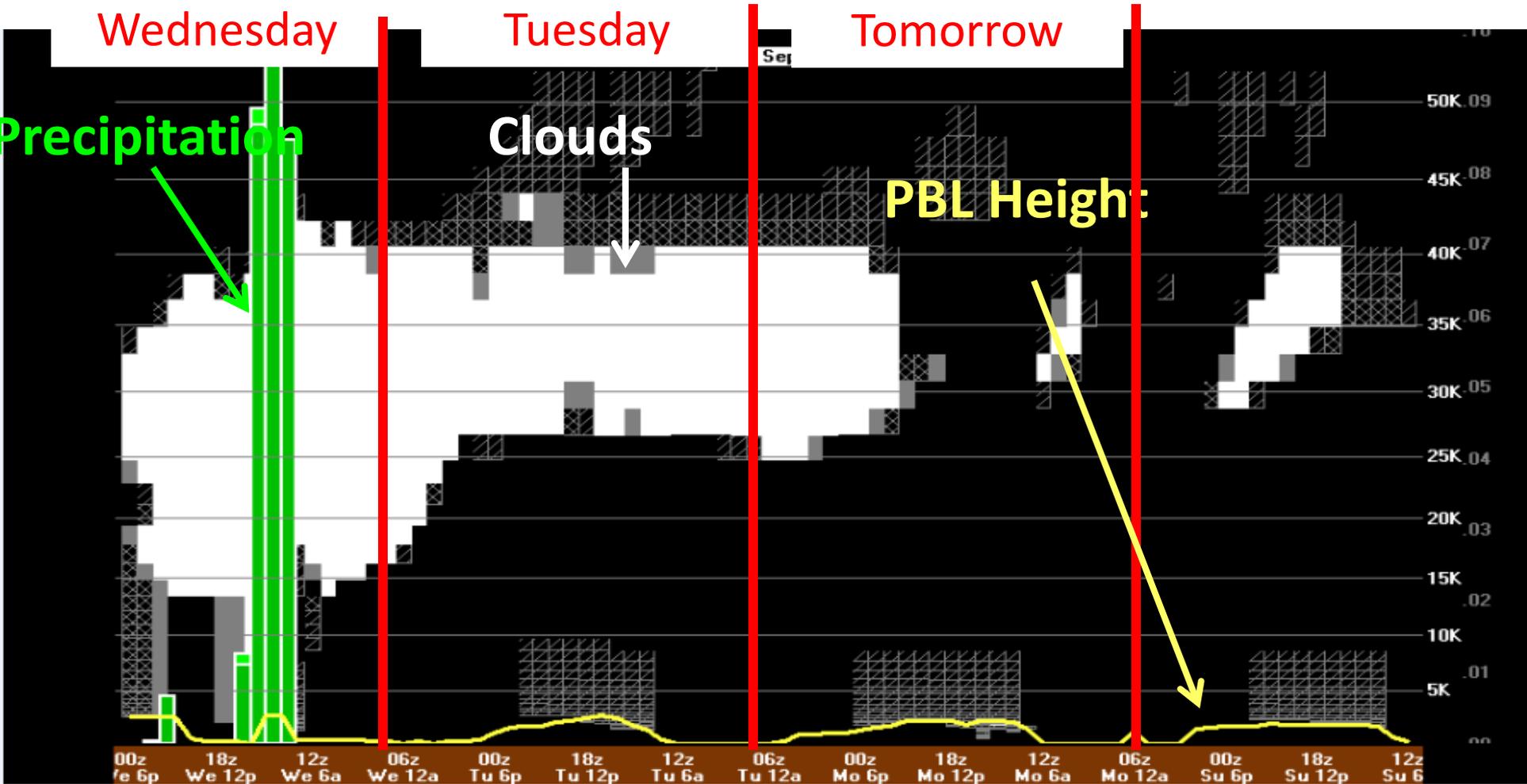
- Tomorrow: Scattered Cu during afternoon; high cloud during afternoon/evening.
- Tuesday: Clouds at low and high levels throughout day.
- Wednesday: Same as Tuesday.

Houston Hobby; BUFKIT – NAM (12 UTC 10 September)



- Tomorrow: Scattered Cu during afternoon; high cloud during afternoon/evening.
- Tuesday: Clouds at low and high levels throughout day.
- Wednesday: High and low clouds; significant precipitation.

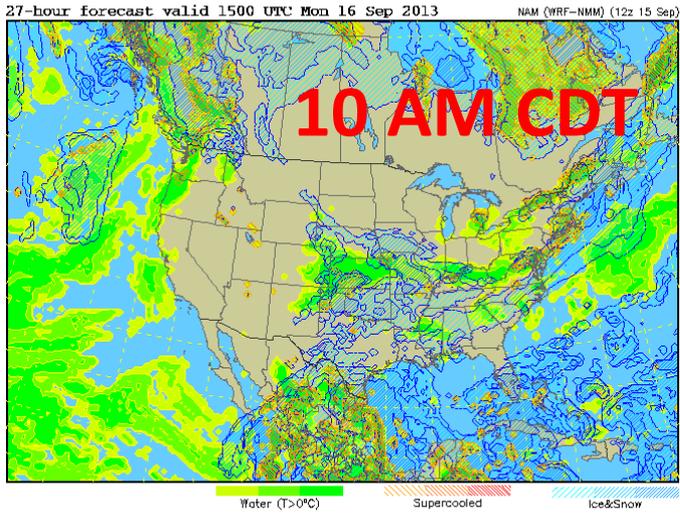
Galveston; BUFKIT – NAM (12 UTC 10 September)



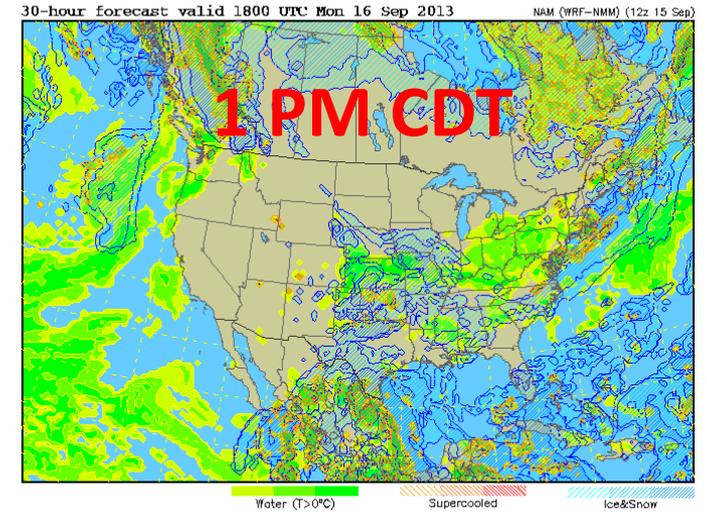
- Tomorrow: Scattered Cu during afternoon; high cloud during afternoon/evening.
- Tuesday: Clouds at low and high levels throughout day.
- Wednesday: High and low clouds; significant precipitation.

Tomorrow: NAM – Cirrus and low cloud all day

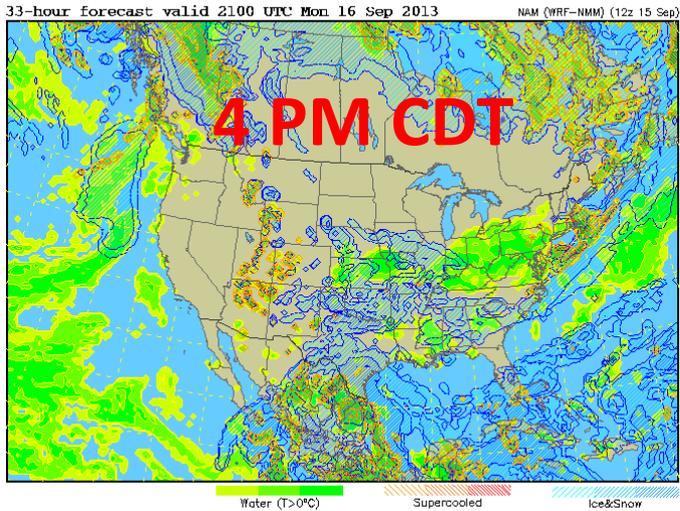
Integrated liquid and frozen hydrometeors (all levels)



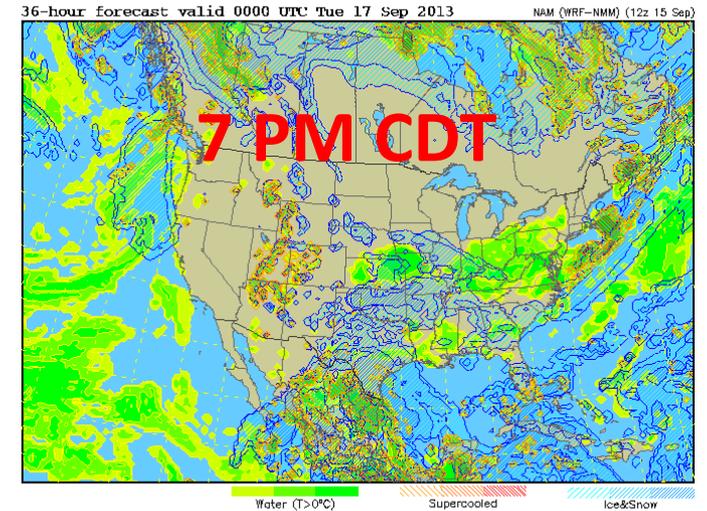
Integrated liquid and frozen hydrometeors (all levels)



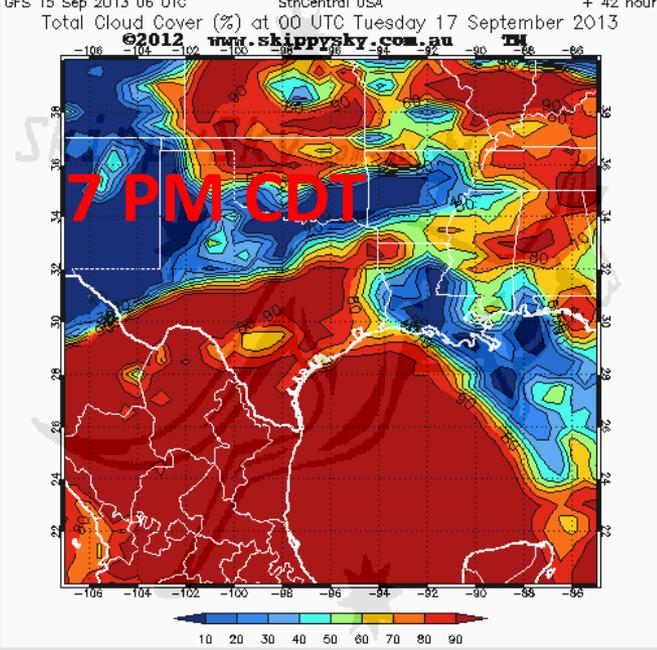
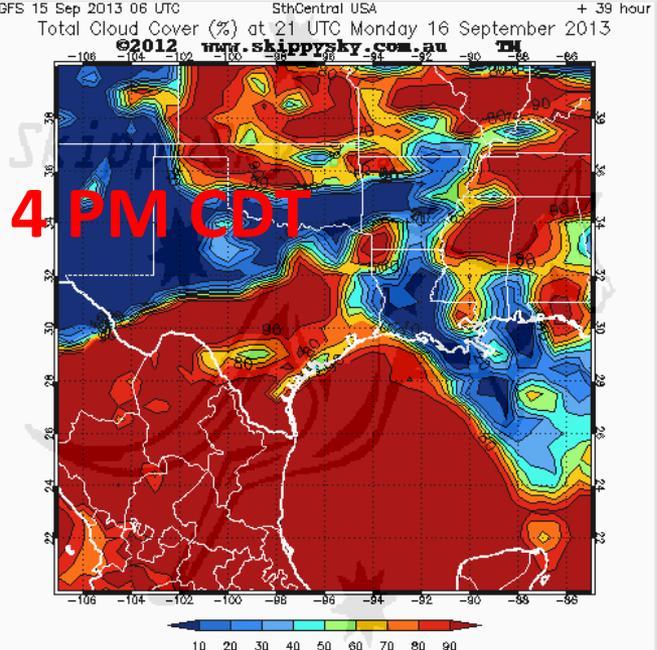
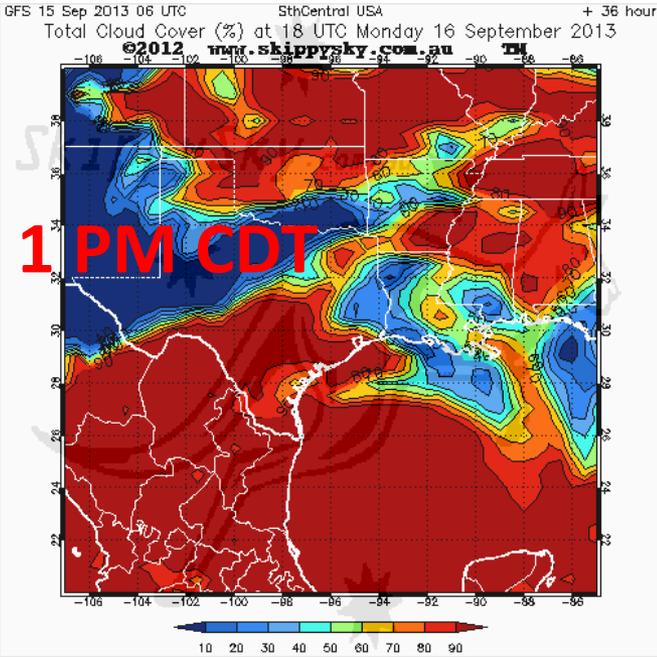
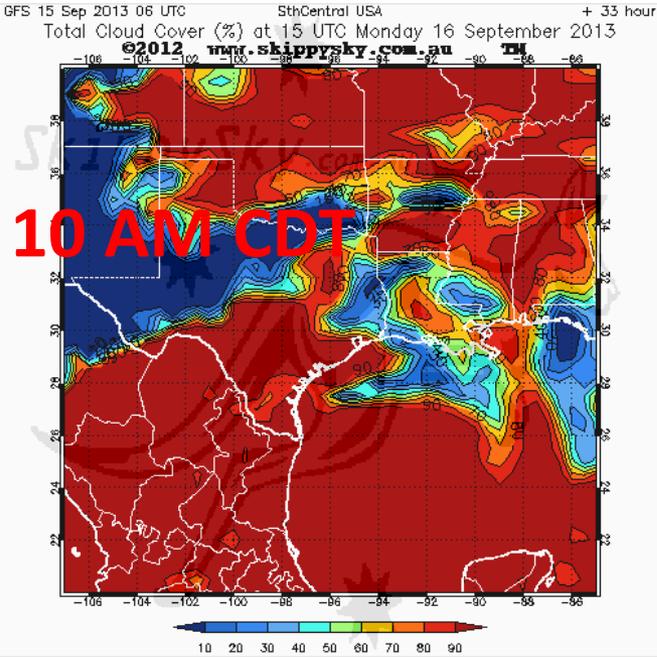
Integrated liquid and frozen hydrometeors (all levels)



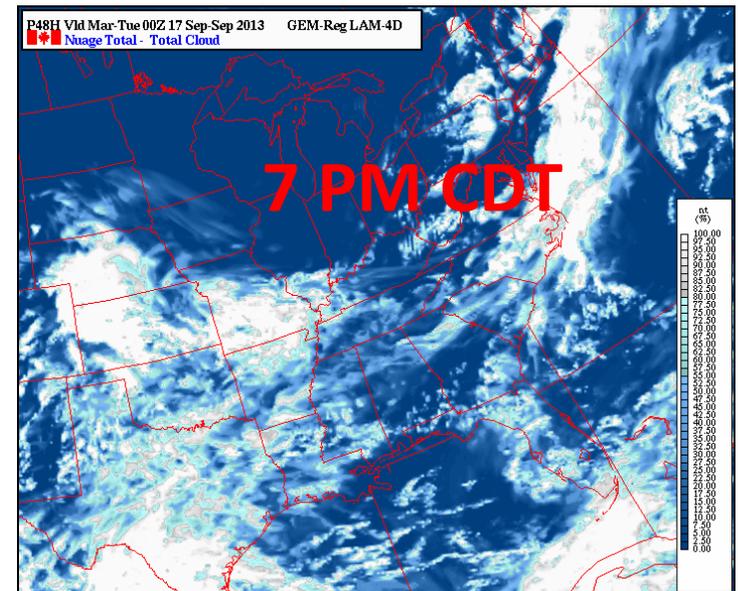
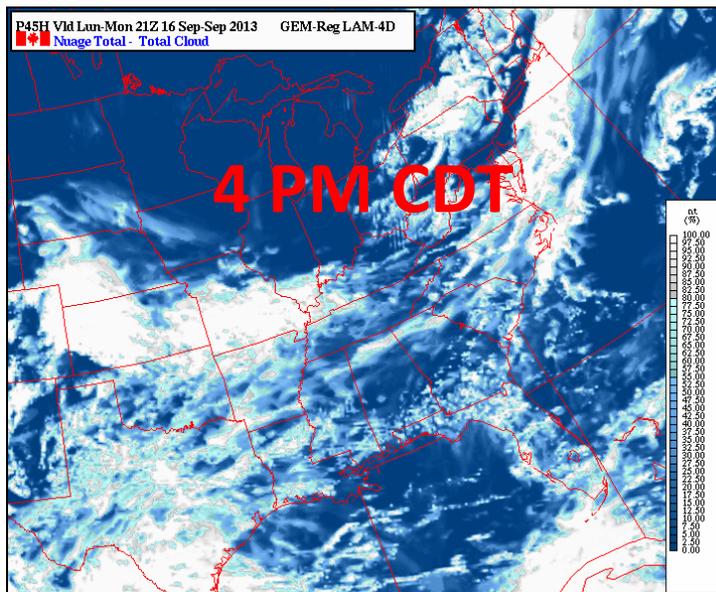
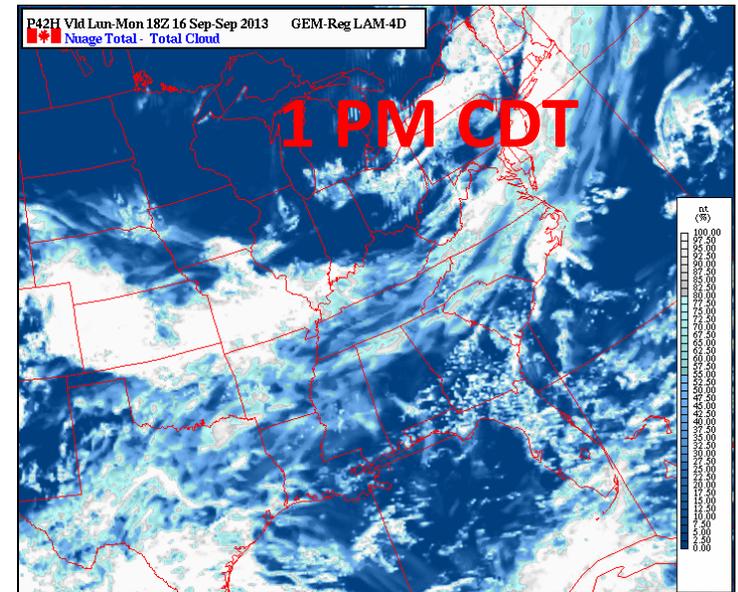
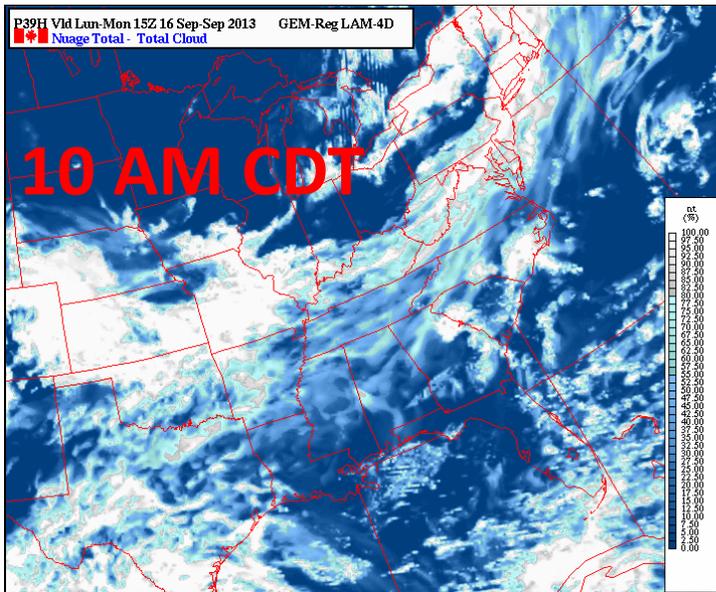
Integrated liquid and frozen hydrometeors (all levels)



Tomorrow: GFS – Cloudy all day



Tomorrow: Canadian – Cloudy all day



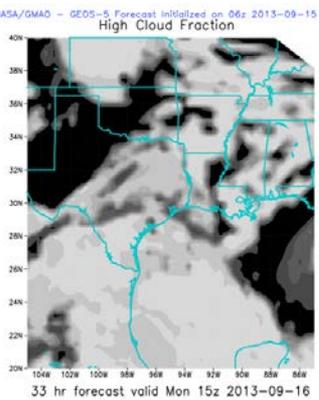
Tomorrow: GEOS-5 –High clouds all day, some low clouds by afternoon

10 am

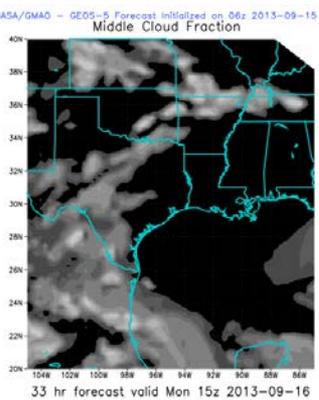
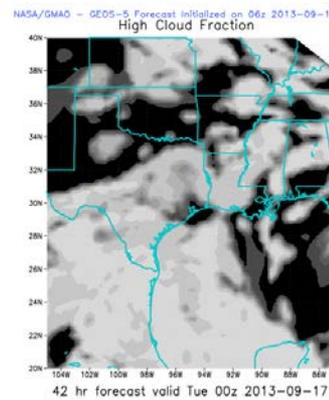
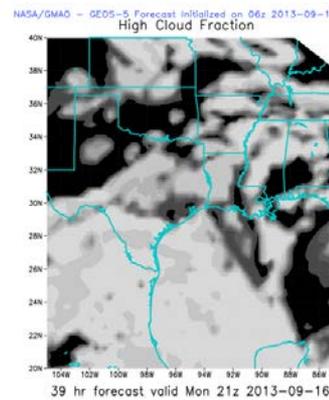
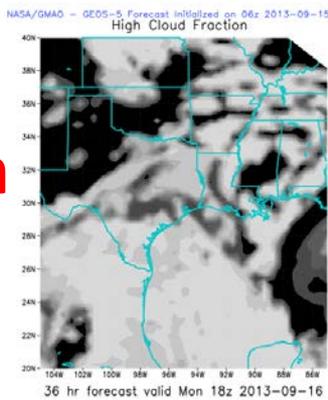
1 pm

4 pm

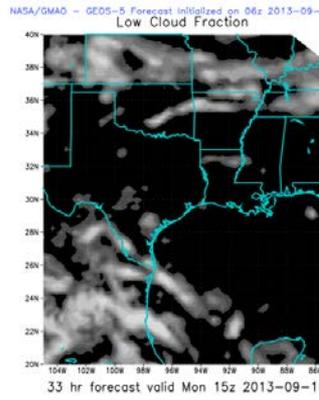
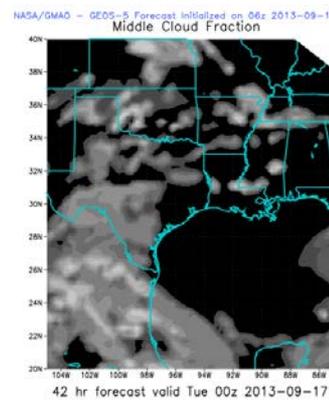
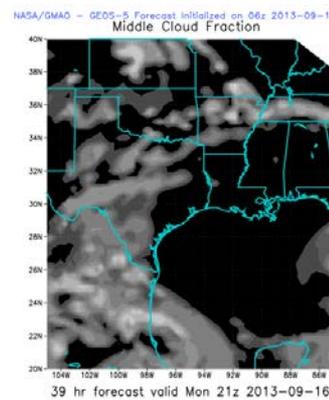
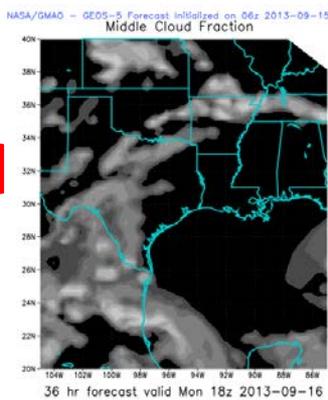
7 pm



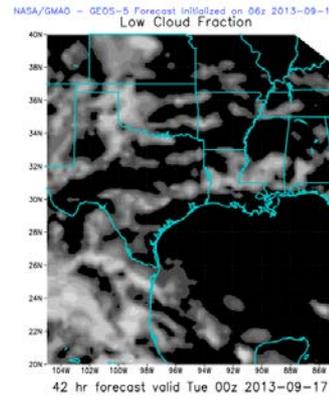
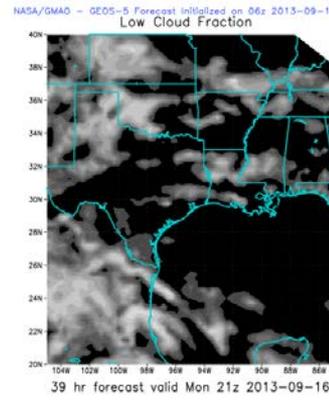
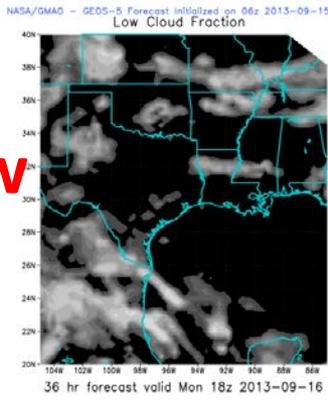
High



Mid

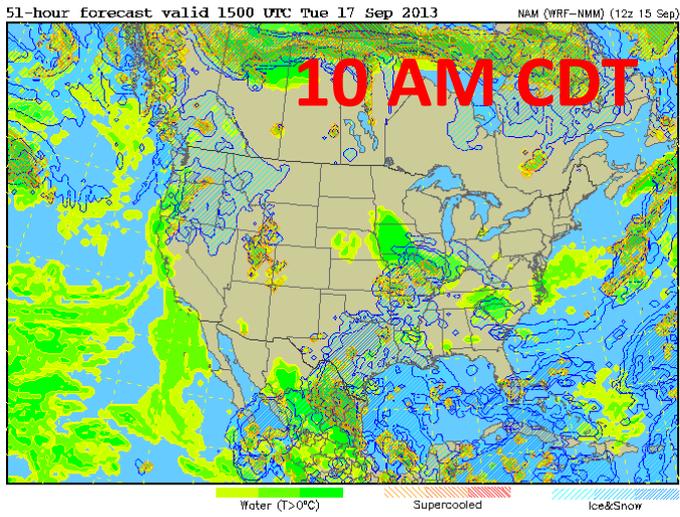


Low

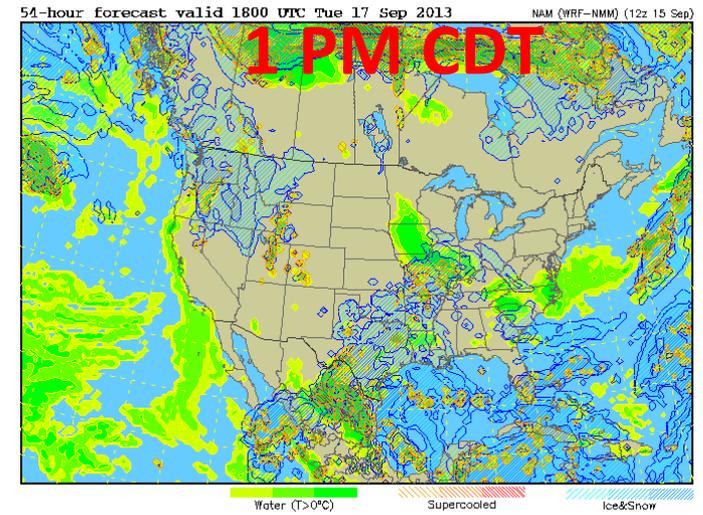


Tuesday: NAM – high level clouds through most of day

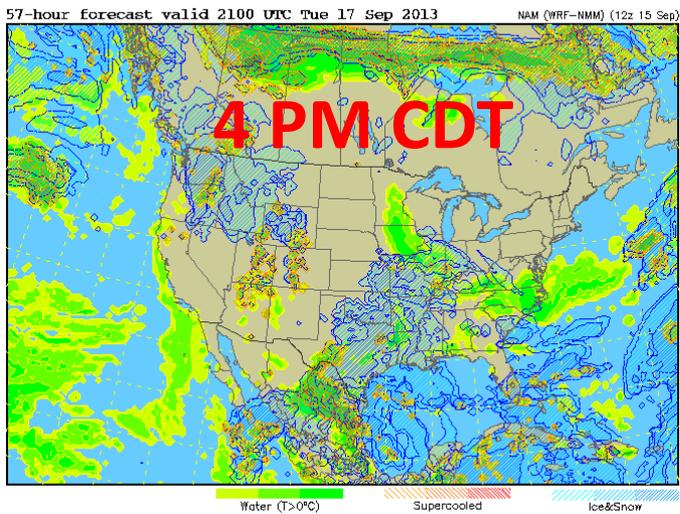
Integrated liquid and frozen hydrometeors (all levels)



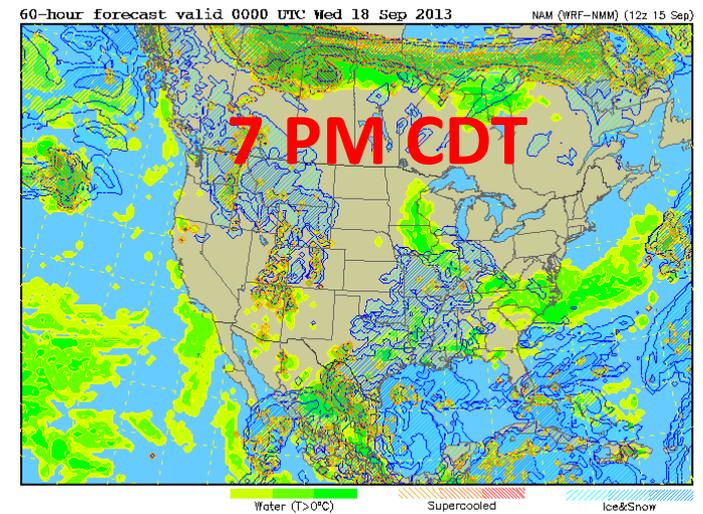
Integrated liquid and frozen hydrometeors (all levels)



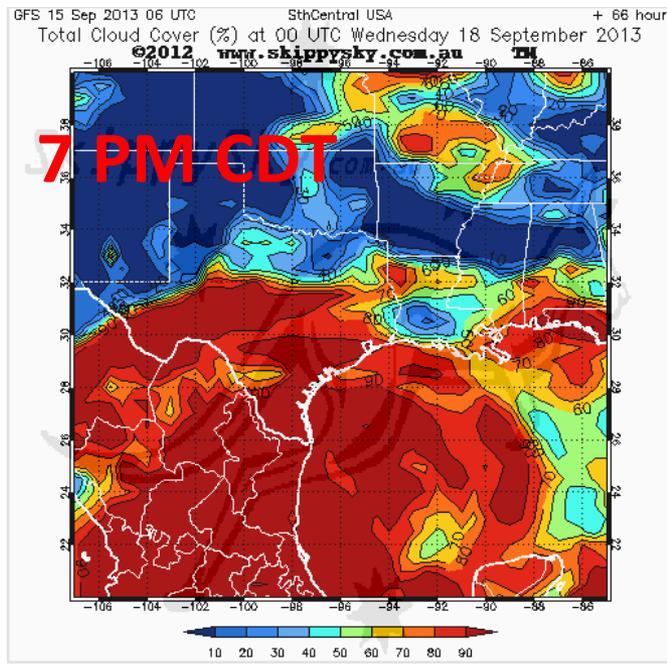
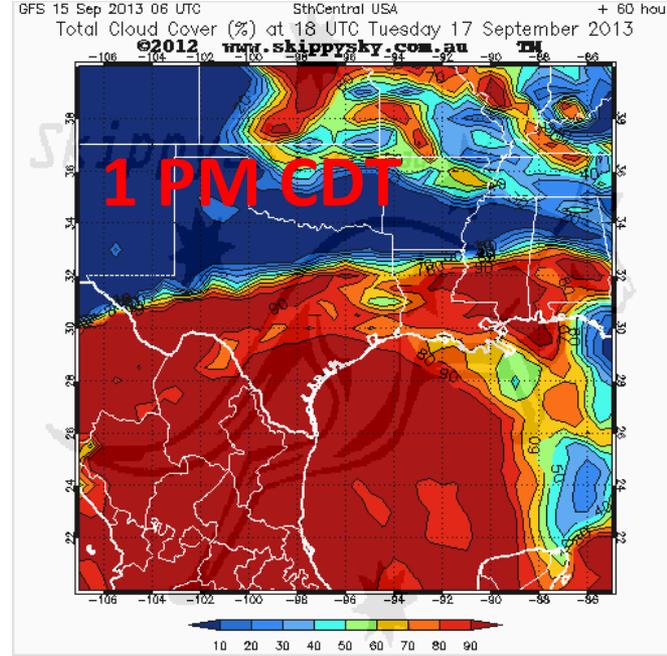
Integrated liquid and frozen hydrometeors (all levels)



Integrated liquid and frozen hydrometeors (all levels)



Tuesday: GFS – Clouds throughout the day



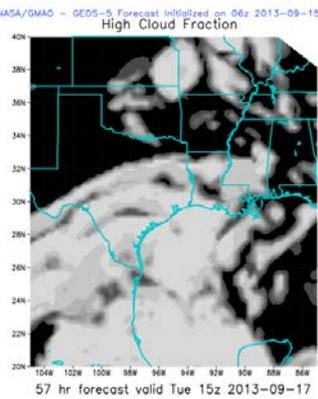
Tuesday: GEOS-5 –high and low level clouds throughout the day

10 am

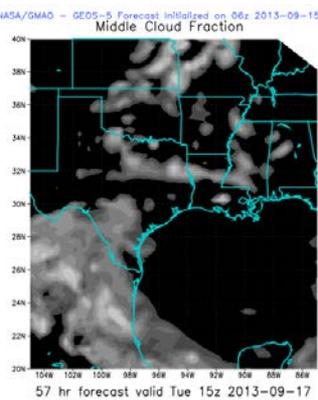
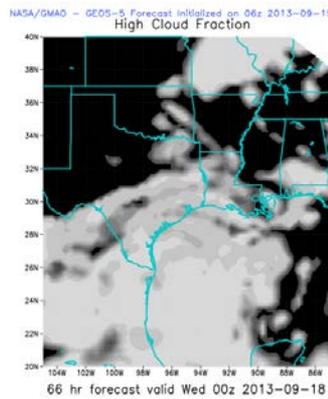
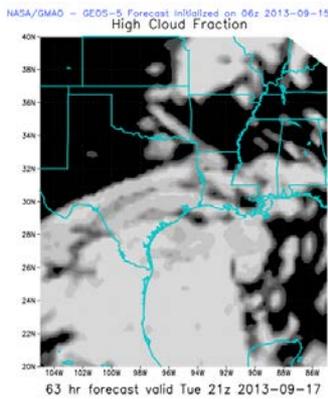
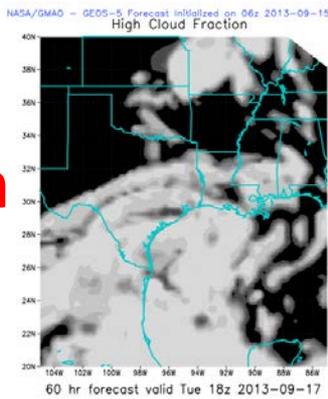
1 pm

4 pm

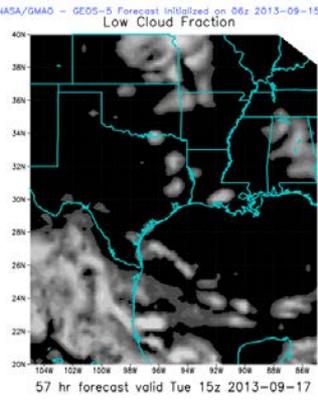
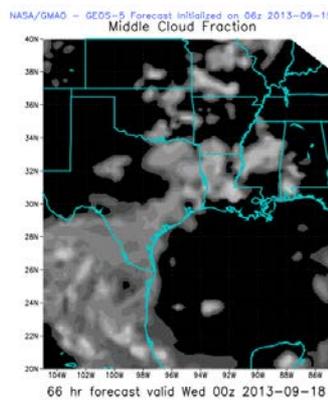
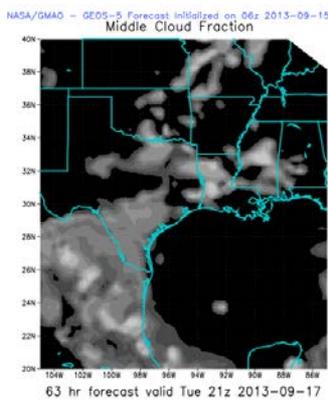
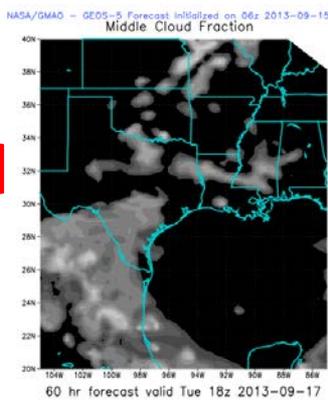
7 pm



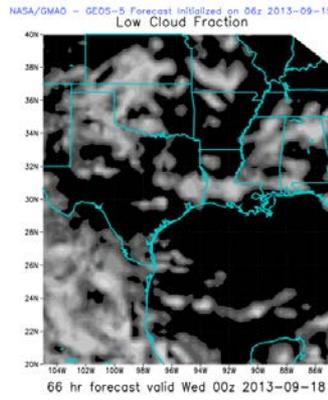
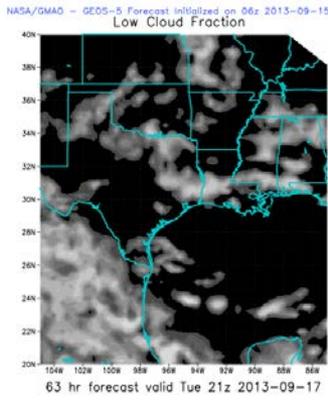
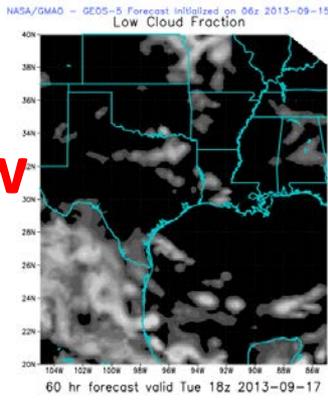
High



Mid

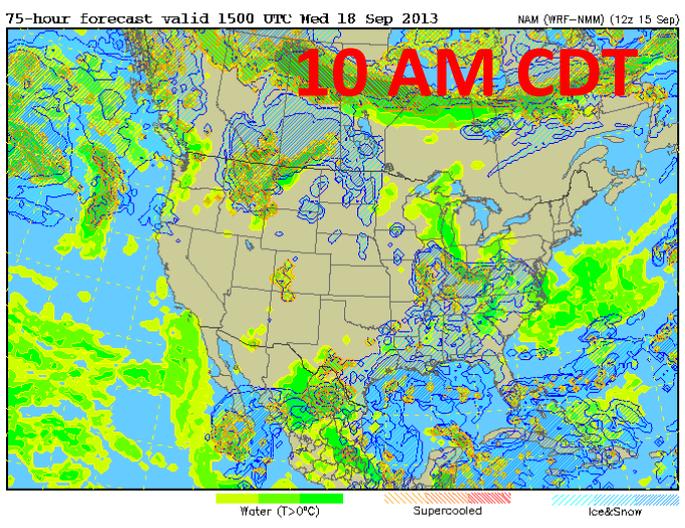


Low

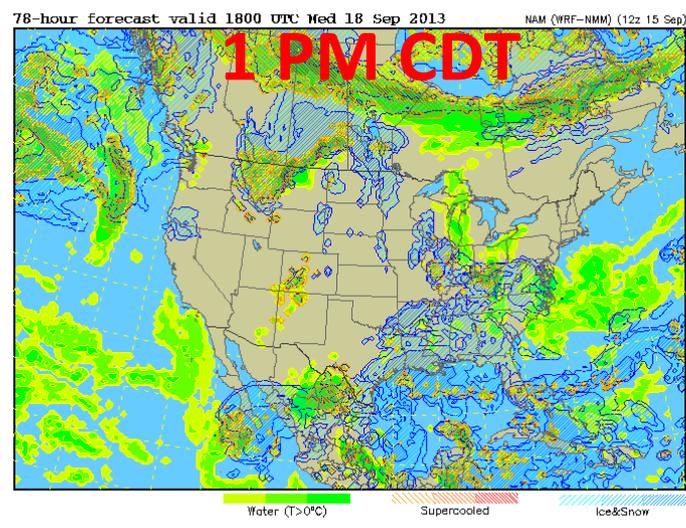


Wednesday: NAM – high cloud coverage decreases

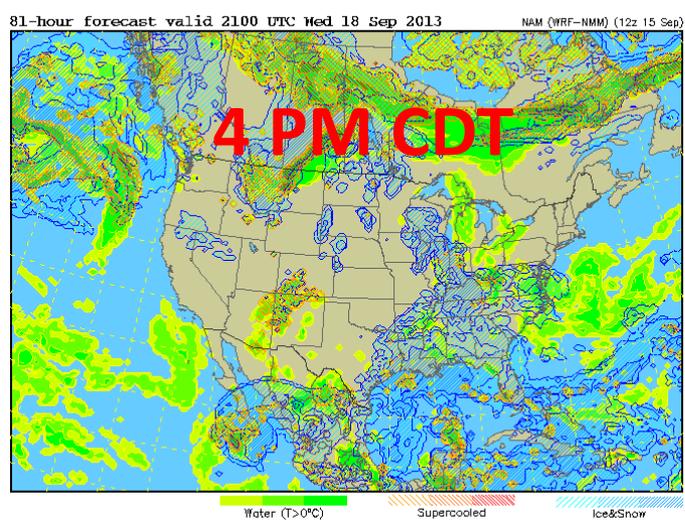
Integrated liquid and frozen hydrometeors (all levels)



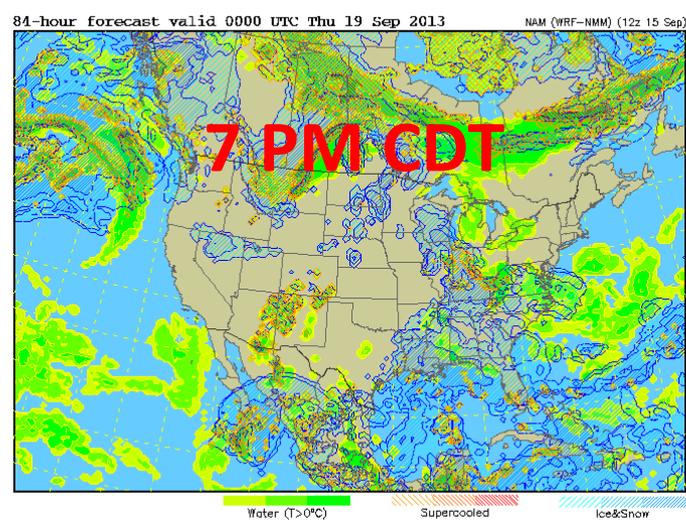
Integrated liquid and frozen hydrometeors (all levels)



Integrated liquid and frozen hydrometeors (all levels)



Integrated liquid and frozen hydrometeors (all levels)



Wednesday: GEOS-5 – some low clouds during afternoon and evening

10 am

1 pm

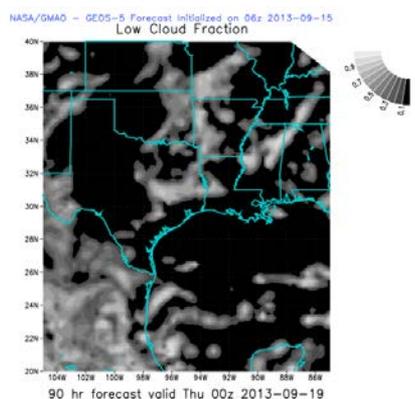
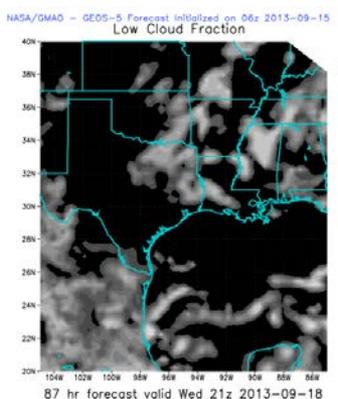
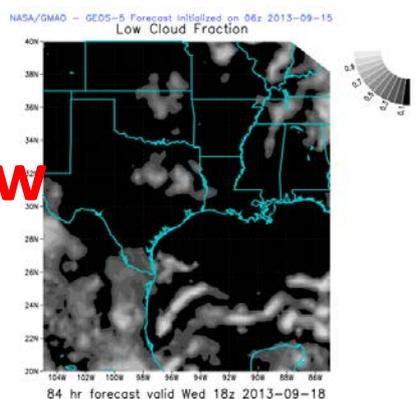
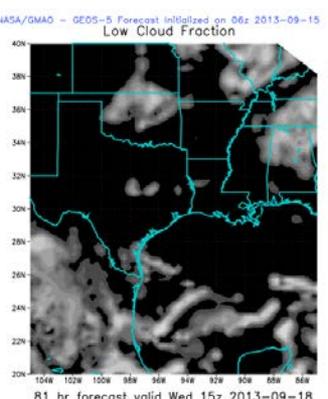
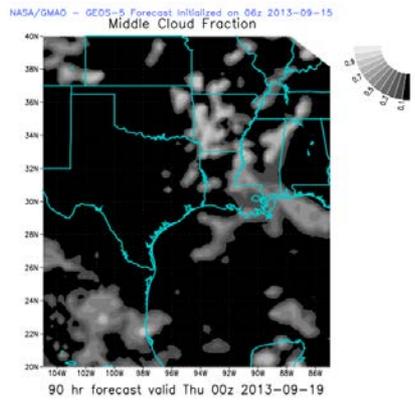
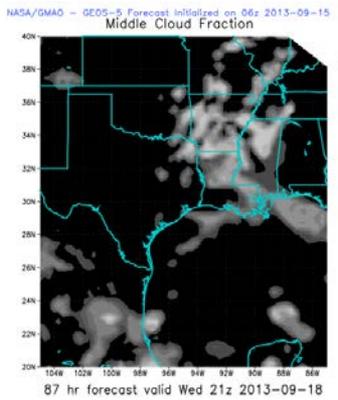
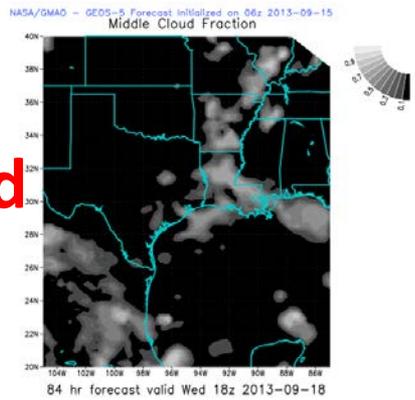
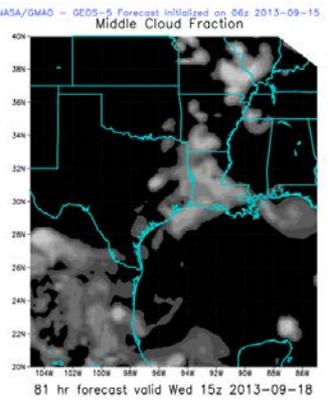
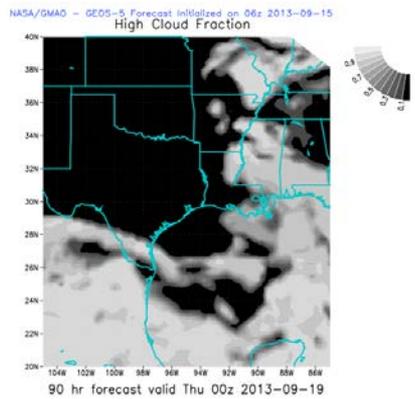
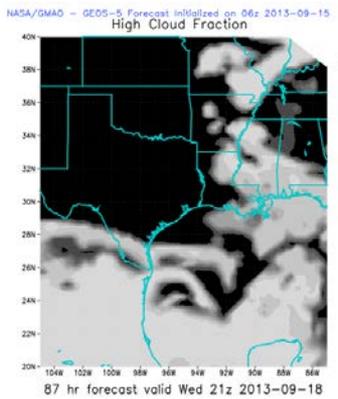
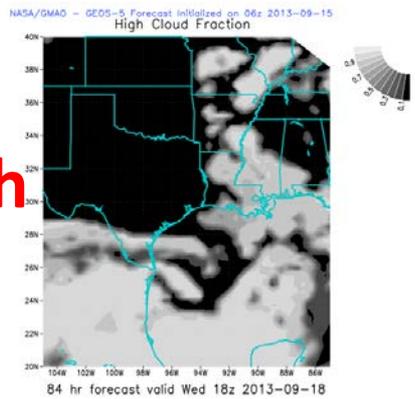
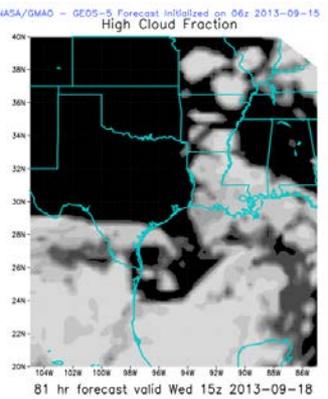
4 pm

7 pm

High

Mid

Low



Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Hurricane Ingrid
Sunday September 15, 2013
10 AM CDT Advisory 13
 NWS National Hurricane Center

Current Information: ●
 Center Location 22.5 N 95.8 W
 Max Sustained Wind 75 mph
 Movement WNW at 6 mph

Forecast Positions:
 ● Tropical Cyclone ○ Post-Tropical
 Sustained Winds: D < 39 mph
 S 39-73 mph H 74-110 mph M > 110mph

Potential Track Area:
 ◁ Day 1-3 ▷ Day 4-5

Watches:
 ■ Hurricane ■ Trop.Storm

Warnings:
 ■ Hurricane ■ Trop.Storm

Recommendations

- Monday and Tuesday: No fly days. Thick cirrus deck over the study region; clouds at lower levels should also thicken throughout the day on both Monday and Tuesday. NWS forecaster predicts deep moisture column throughout the day on both days, though precipitation should stay near the coast.
- Wednesday: Possibly a fly day; cloud coverage decreases on this day.

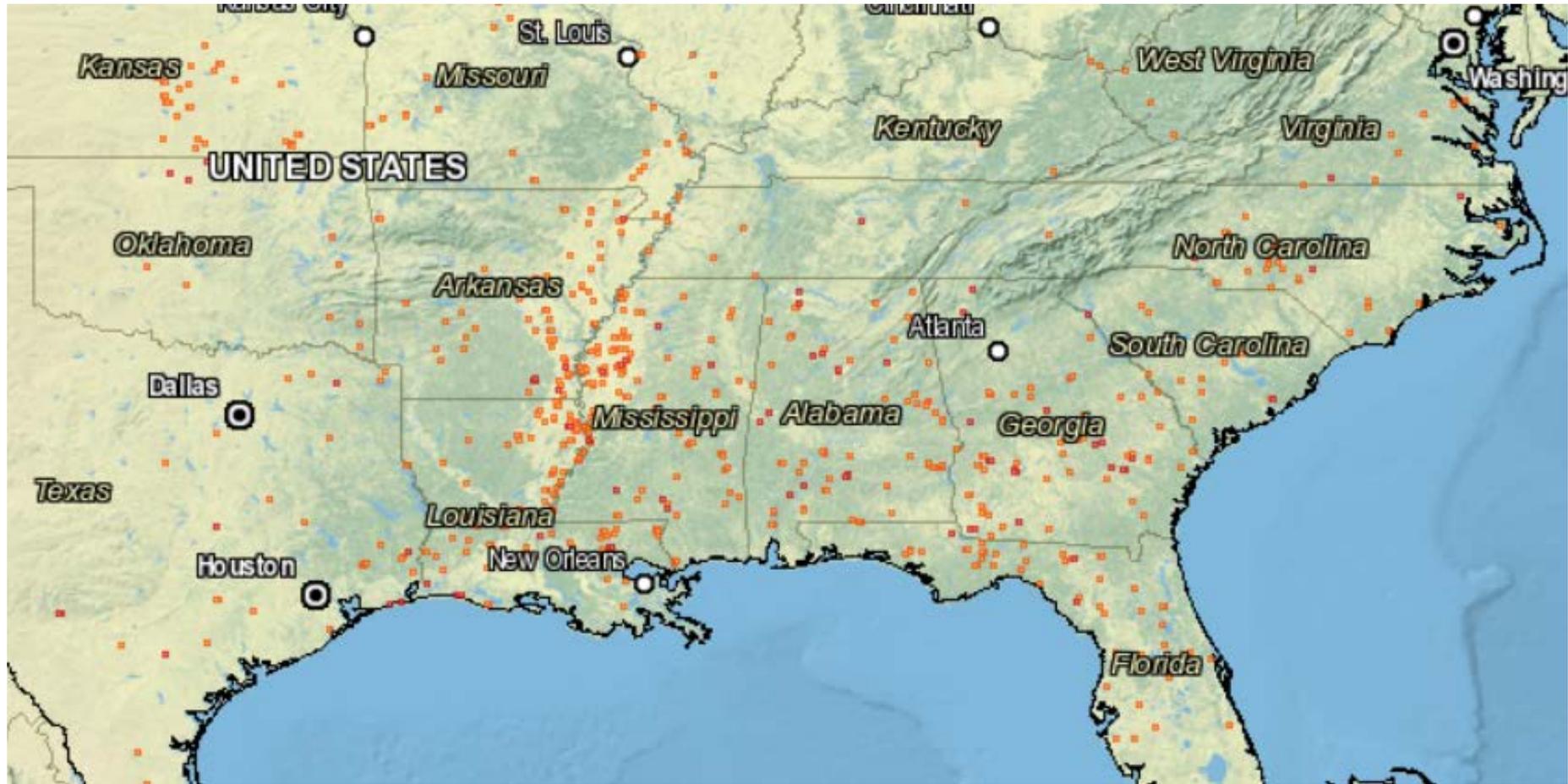
DISCOVER-AQ Air Quality Outlook

September 15, 2013

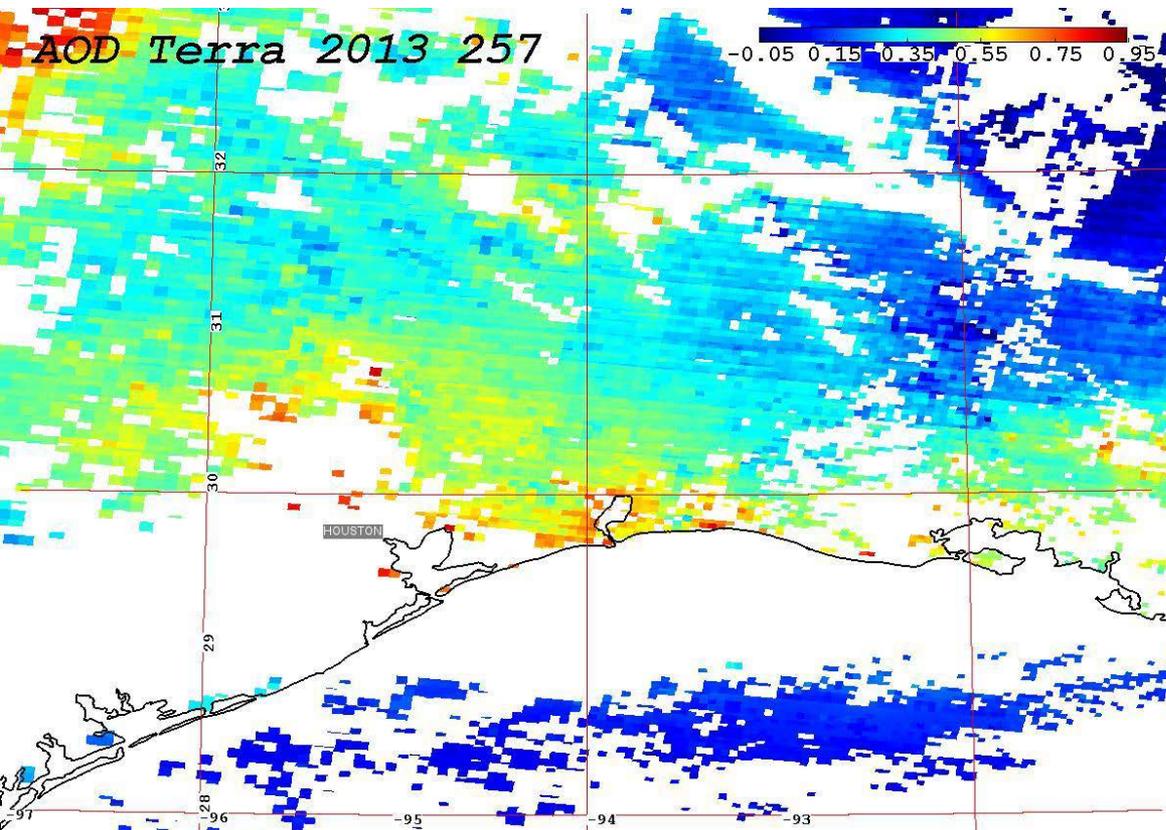
Bryan Duncan

Mariel Friberg

Fire-counts over last week.



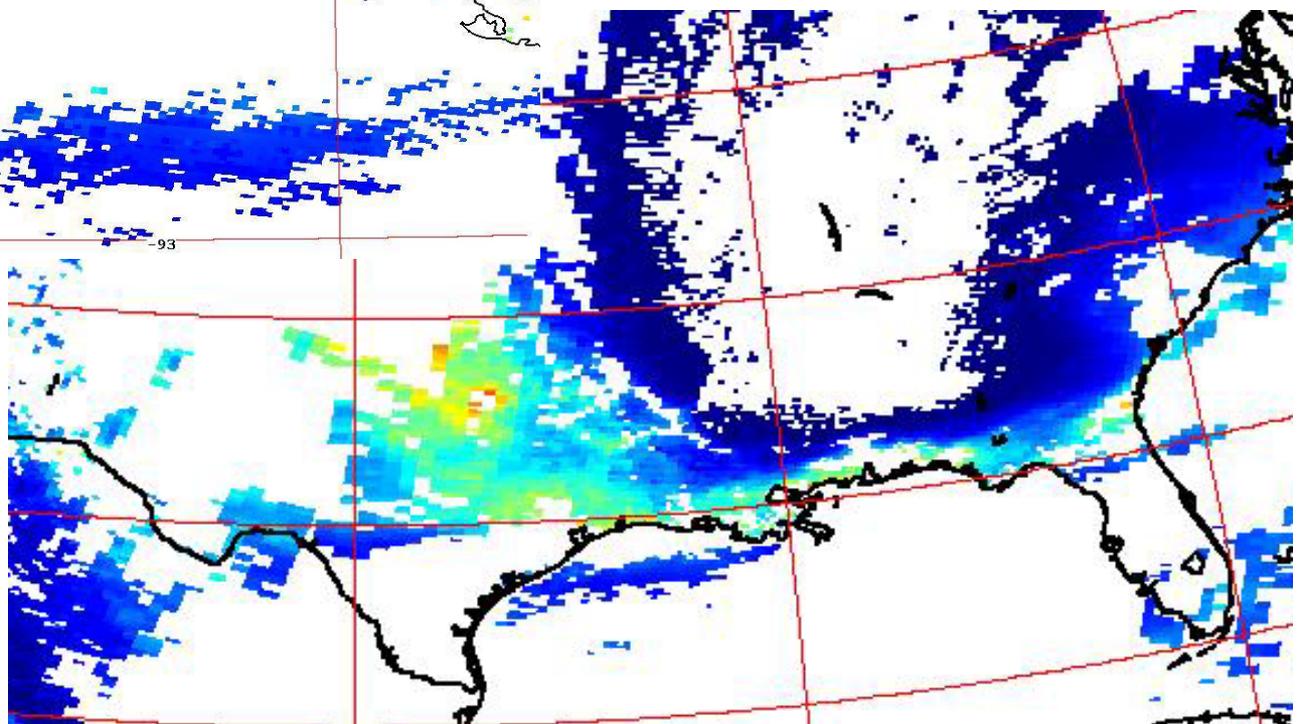
Terra AOD - Yesterday



High AOD associated with agricultural fire plume.

Backdoor cold front pushed smoke over Houston.

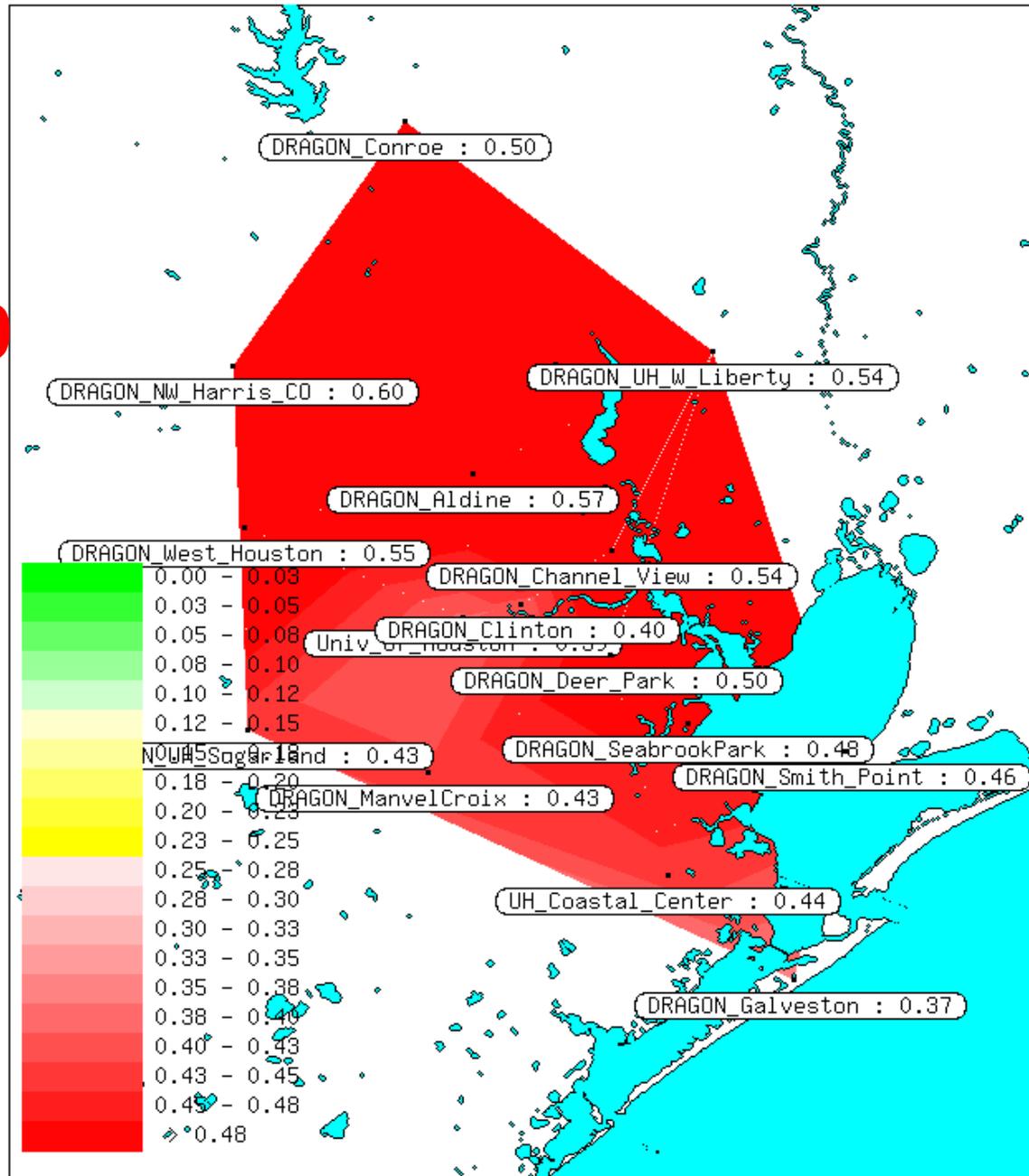
Terra AOD - Yesterday



Aqua AOD - Too many clouds

DRAGON : September 14th (Saturday) at Level 1.5

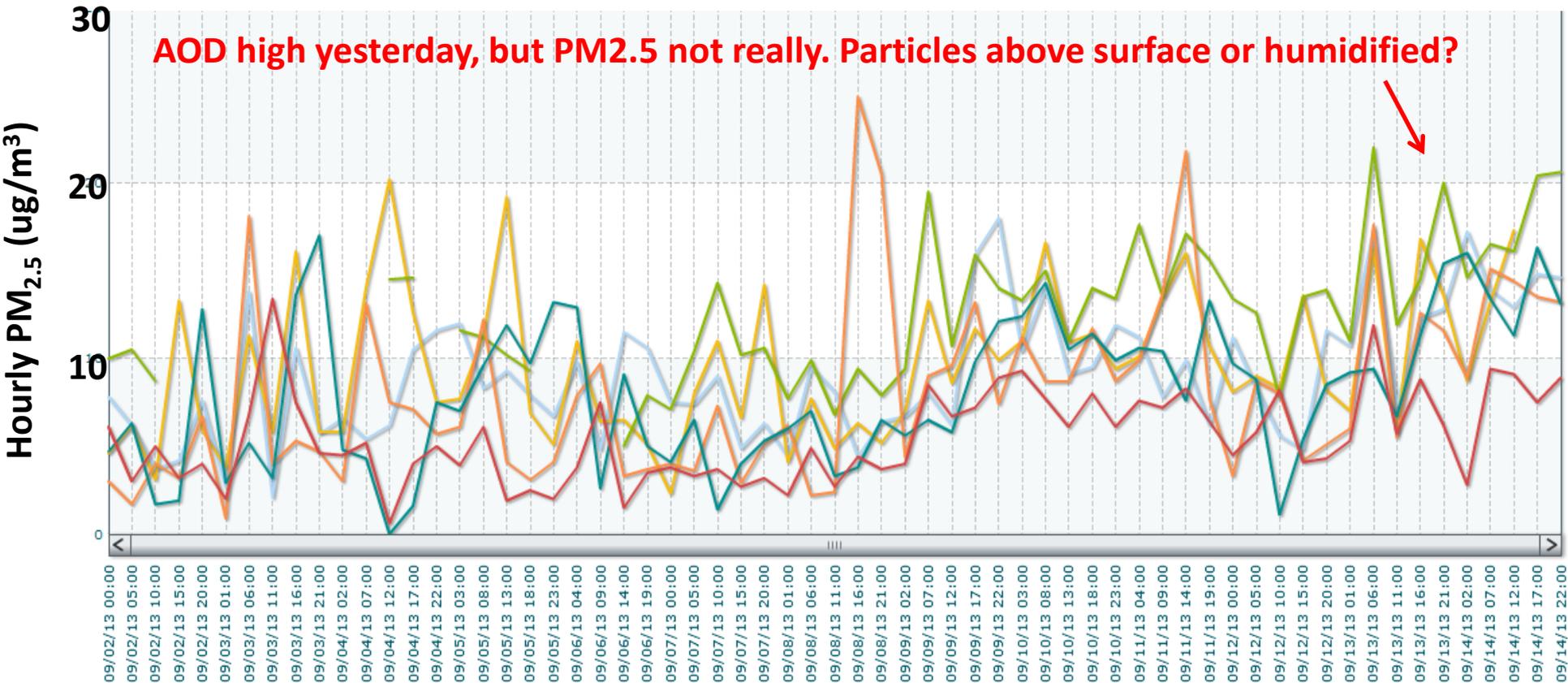
0.37-0.60



Hourly PM_{2.5} (airnowtech.org)**

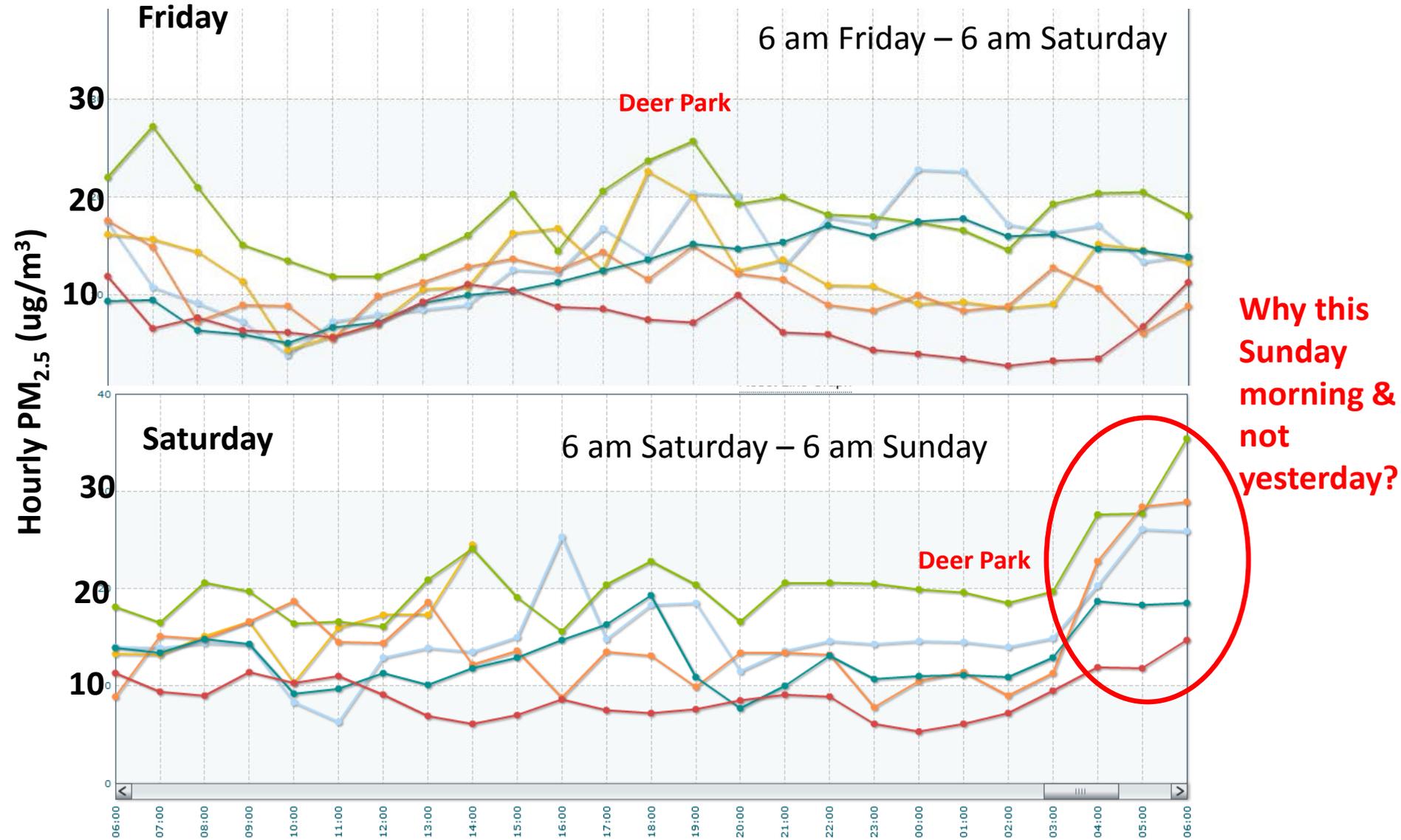
September 2nd – 14th

** EVERY 5th HOUR PLOTTED!!!!



- Houston Aldine C8/PM_{2.5}-88502 - 88502/1 Hr/3
- Houston Deer Park C35/PM_{2.5}-88502 - 88502/1 Hr/3
- Conroe Relocated C78/PM_{2.5}-88502 - 88502/1 Hr/3
- Clinton C403/PM_{2.5}-88502 - 88502/1 Hr/3
- Seabrook Friendship Park C45/PM_{2.5}-88502 - 88502/1 Hr/3
- Galveston Airport C1034/PM_{2.5}-88502 - 88502/1 Hr/3

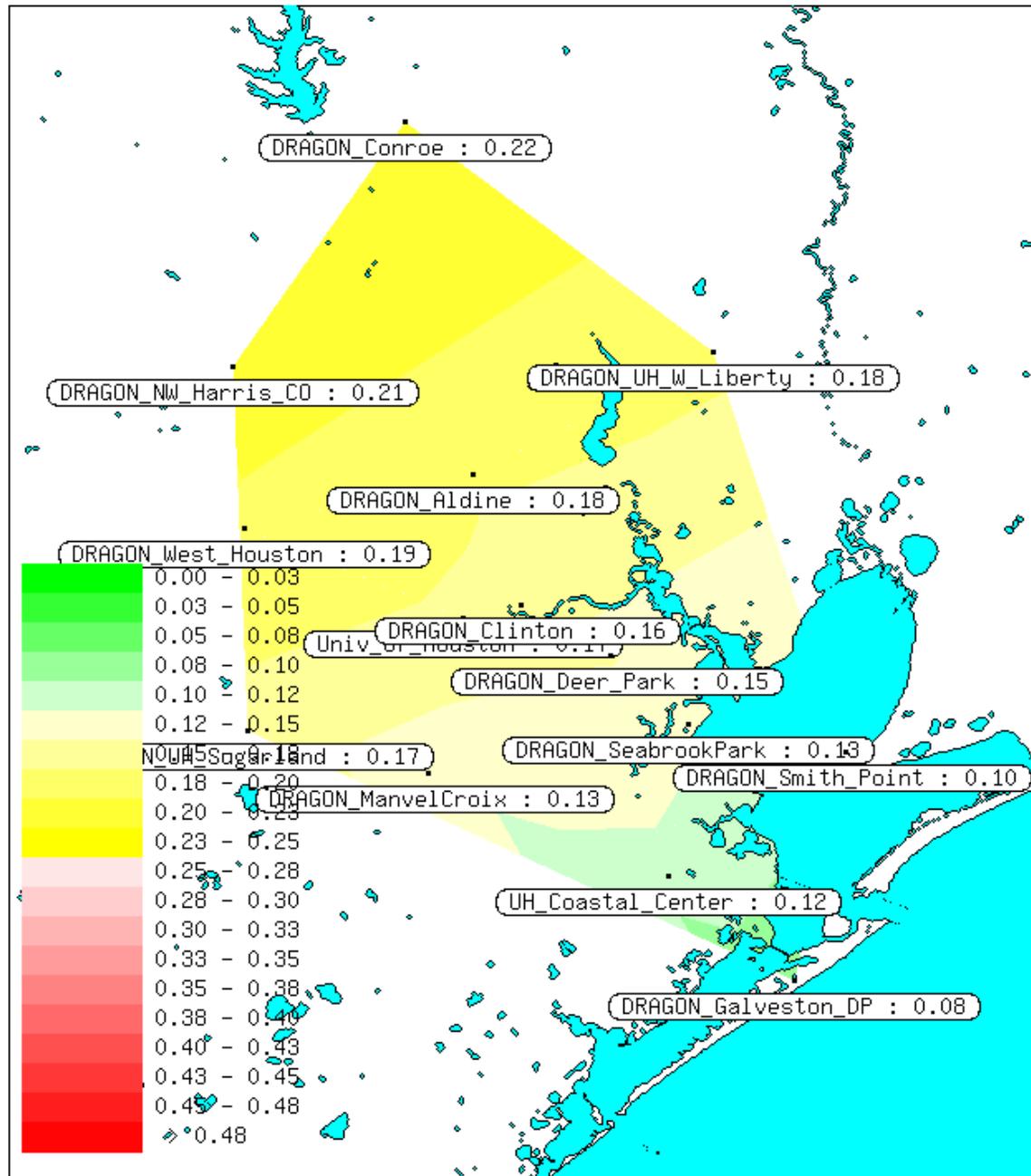
Hourly PM_{2.5} (airnowtech.org)



- ◆ Houston Aldine C8/PM2.5-88502 - 88502/1 Hr/3
- ◆ Houston Deer Park C35/PM2.5-88502 - 88502/1 Hr/3
- ◆ Conroe Relocated C78/PM2.5-88502 - 88502/1 Hr/3
- ◆ Clinton C403/PM2.5-88502 - 88502/1 Hr/3
- ◆ Seabrook Friendship Park C45/PM2.5-88502 - 88502/1 Hr/3
- ◆ Galveston Airport C1034/PM2.5-88502 - 88502/1 Hr/3

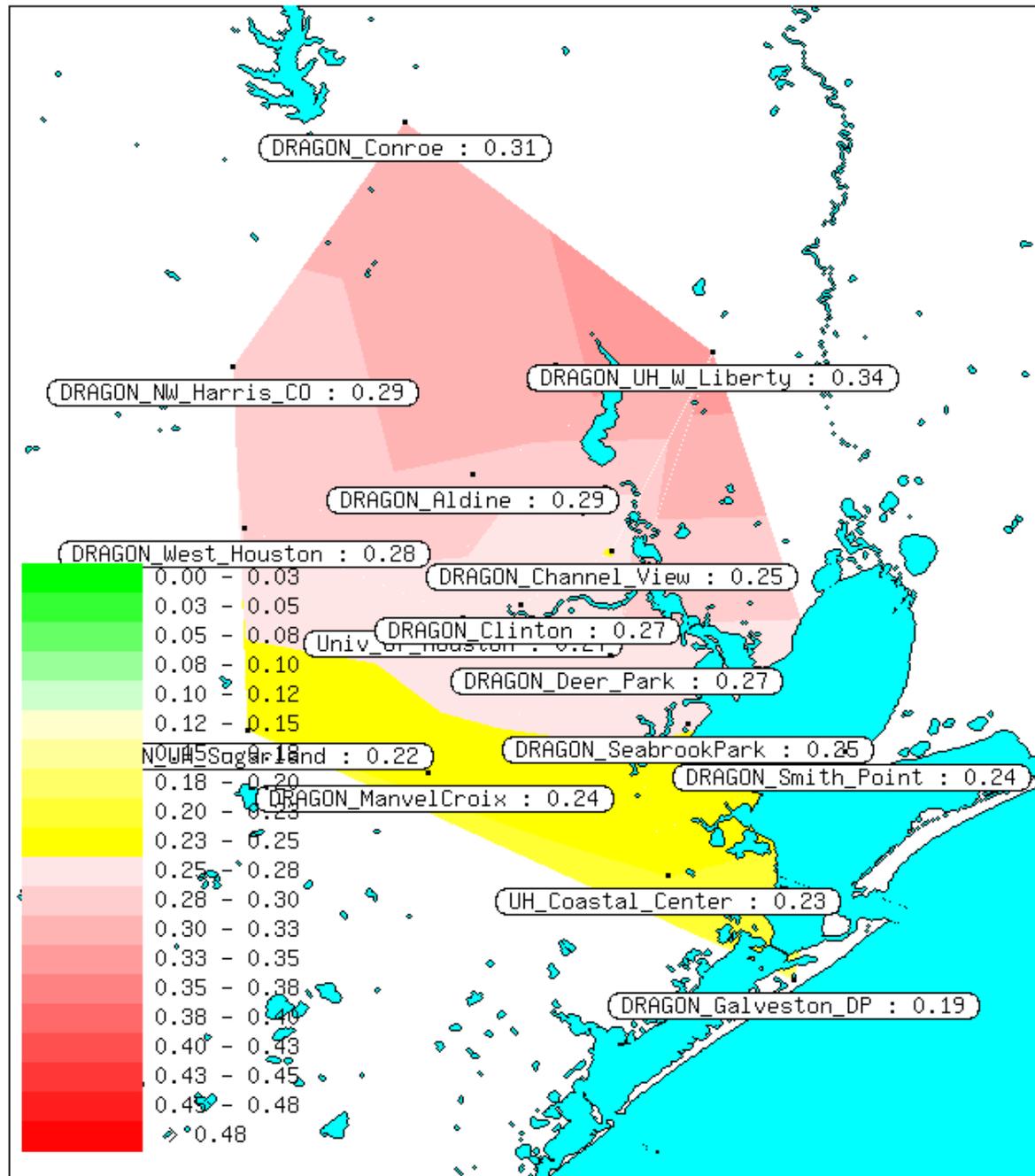
DRAGON : September 12th (Thursday) at Level 1.5

0.08-0.22



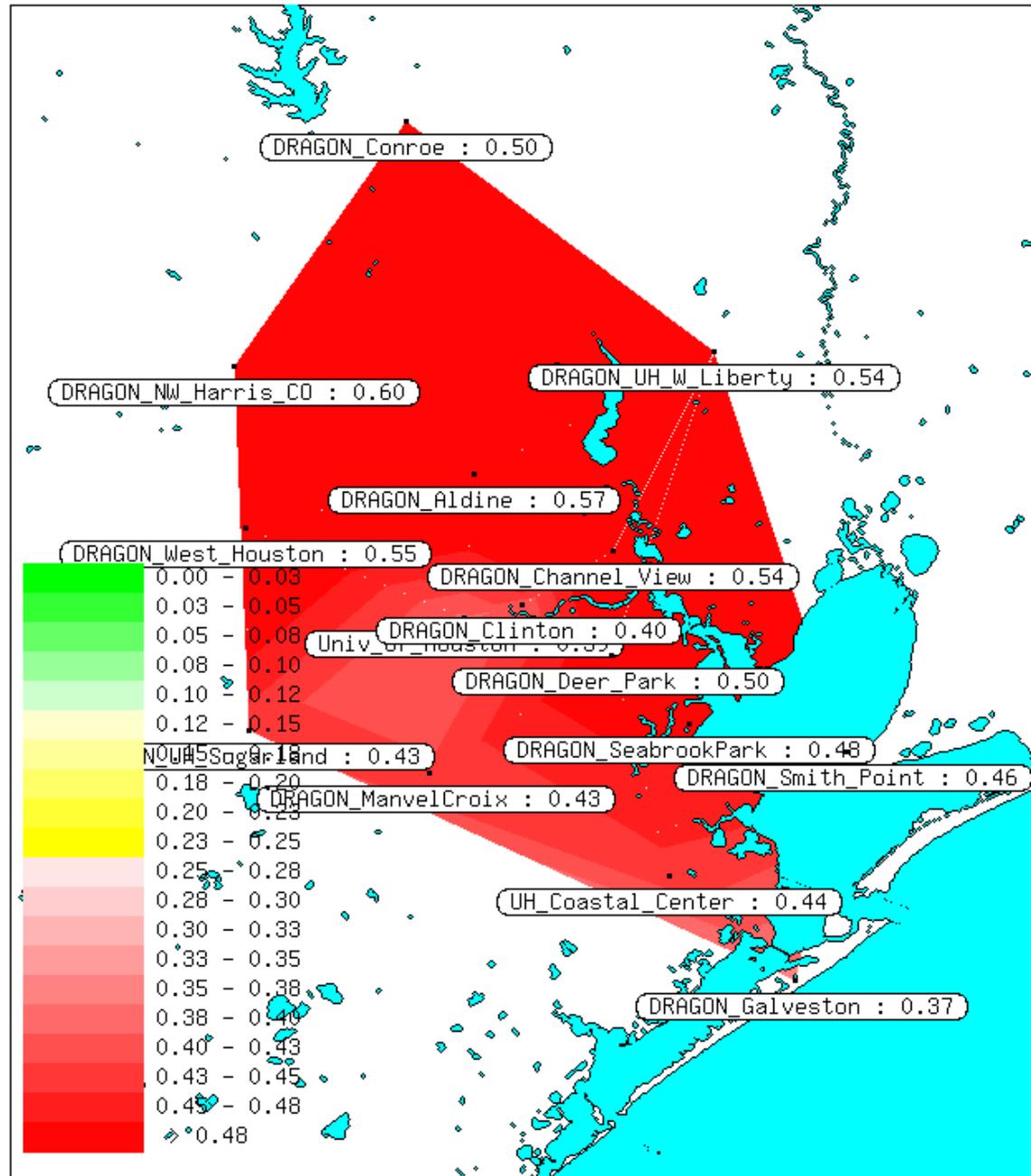
DRAGON : September 13th (Friday) at Level 1.5

0.19-0.34



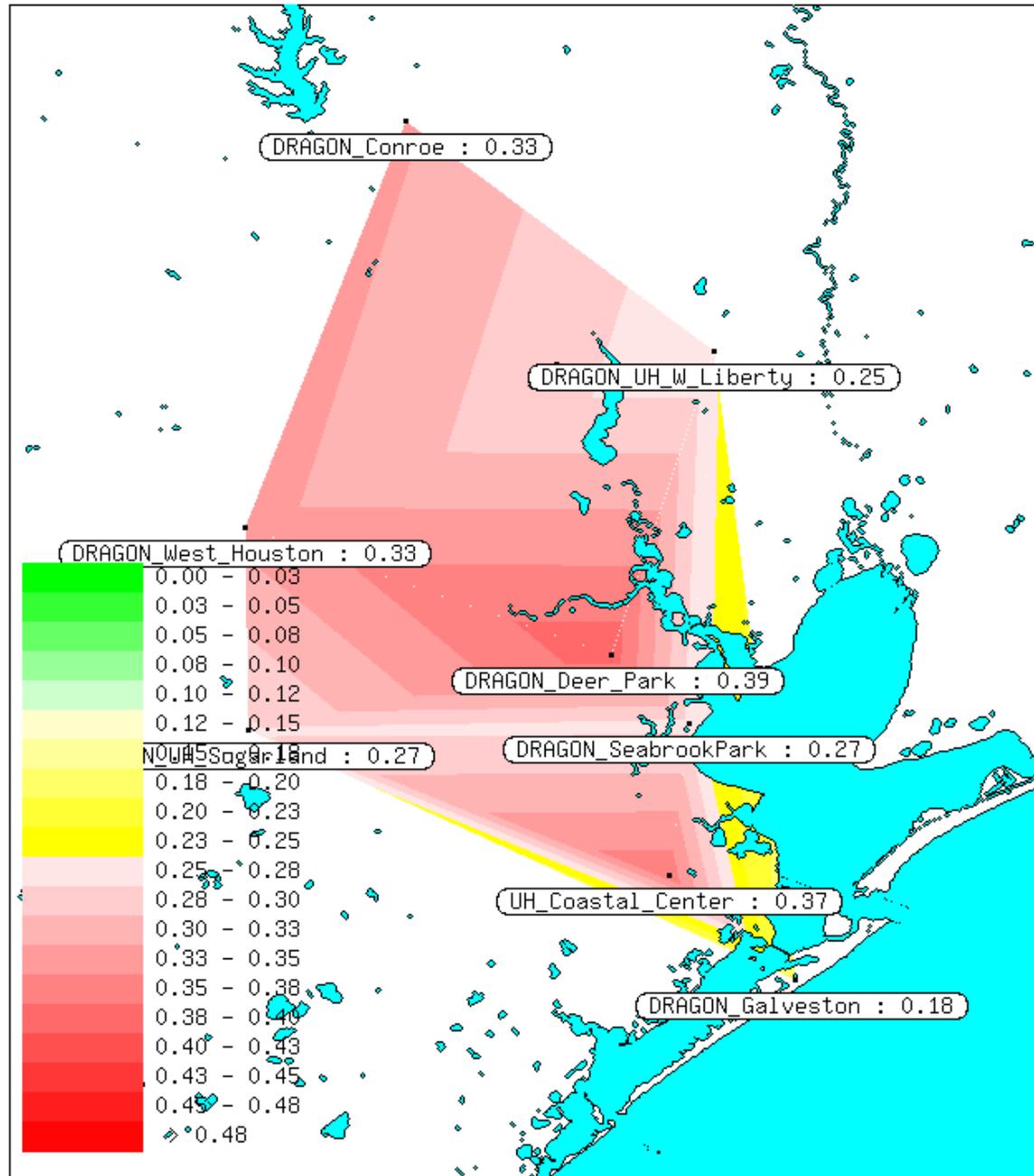
DRAGON : September 14th (Saturday) at Level 1.5

0.37-0.60



DRAGON : September 15th (Today) at Level 1.5

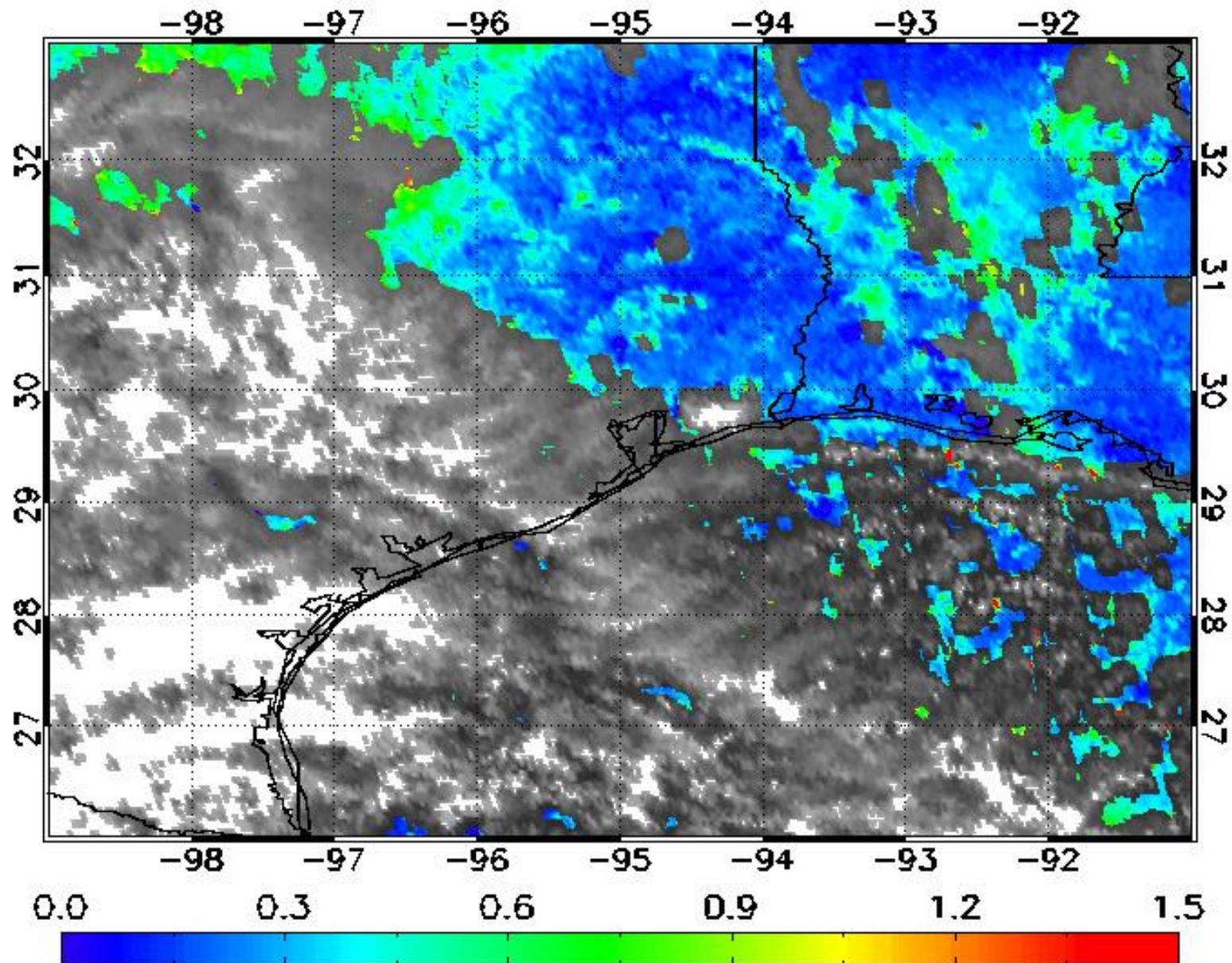
0.18-0.39



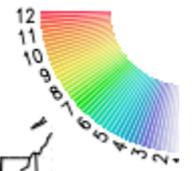
GOES AOD – 9:15 am Today

GOES EAST Aerosol Optical Depth

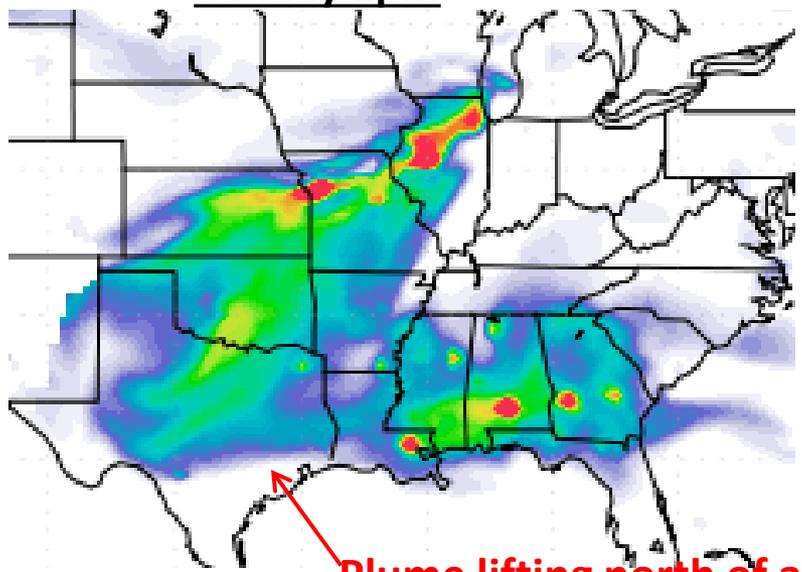
14:15UTC 9/15/2013



GEOS-5: Organic Carbon (ug/kg) : 850 hPa

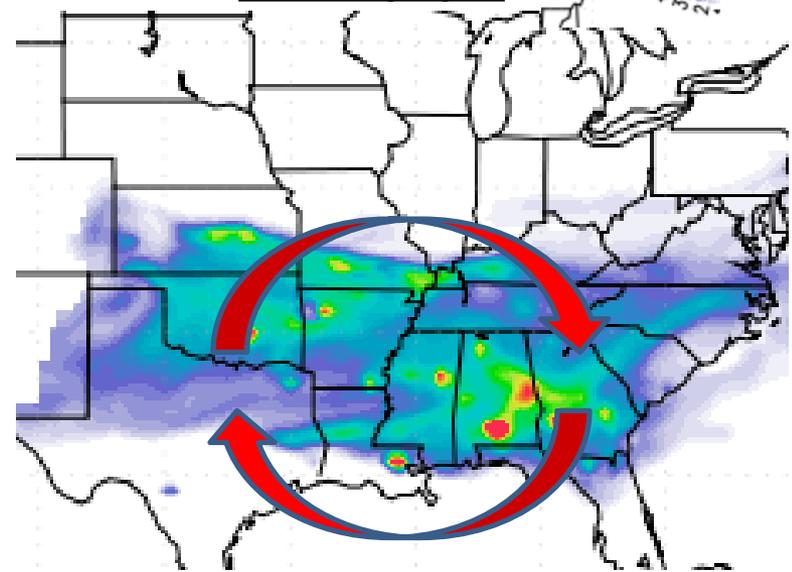


Sunday 1pm

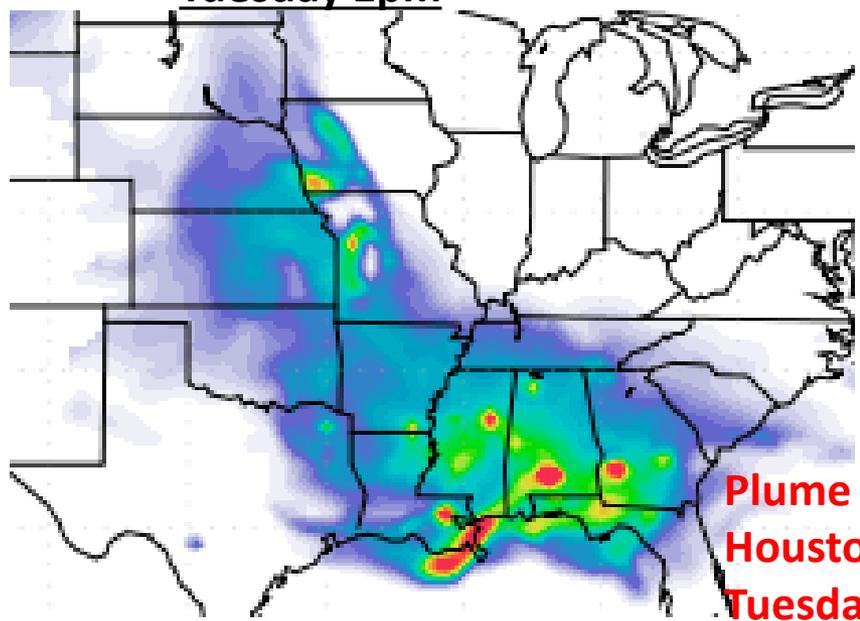


Plume lifting north of area today

Monday 1pm

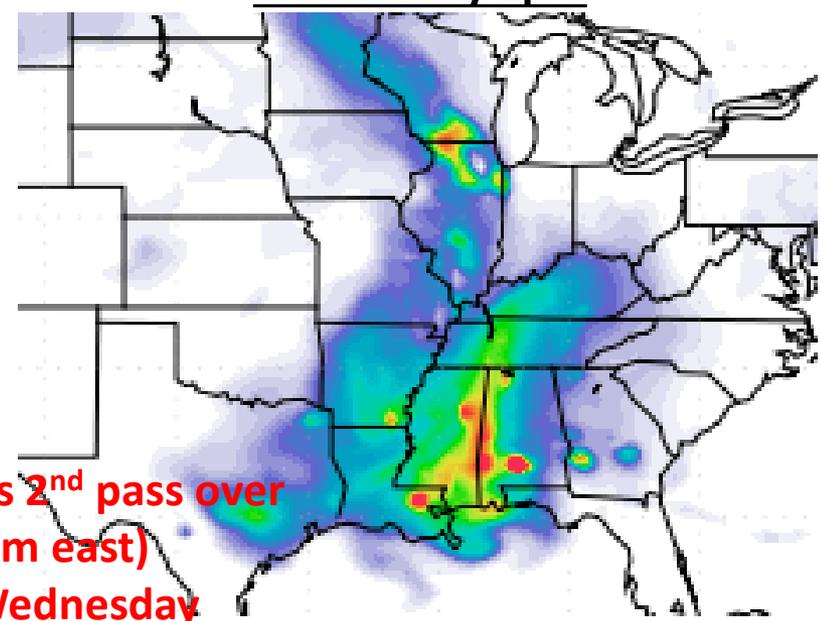


Tuesday 1pm

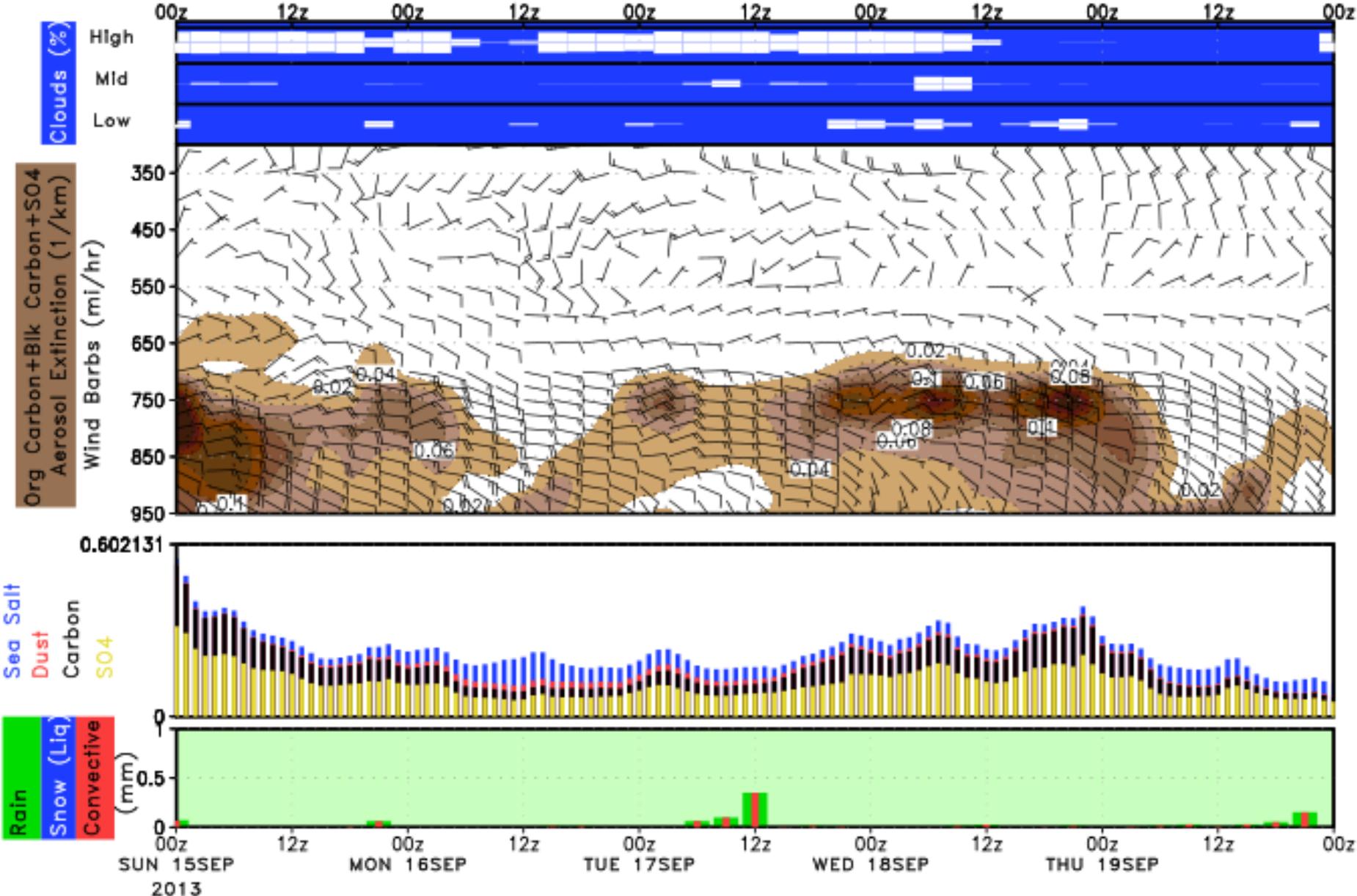


Plume makes 2nd pass over Houston (from east) Tuesday & Wednesday

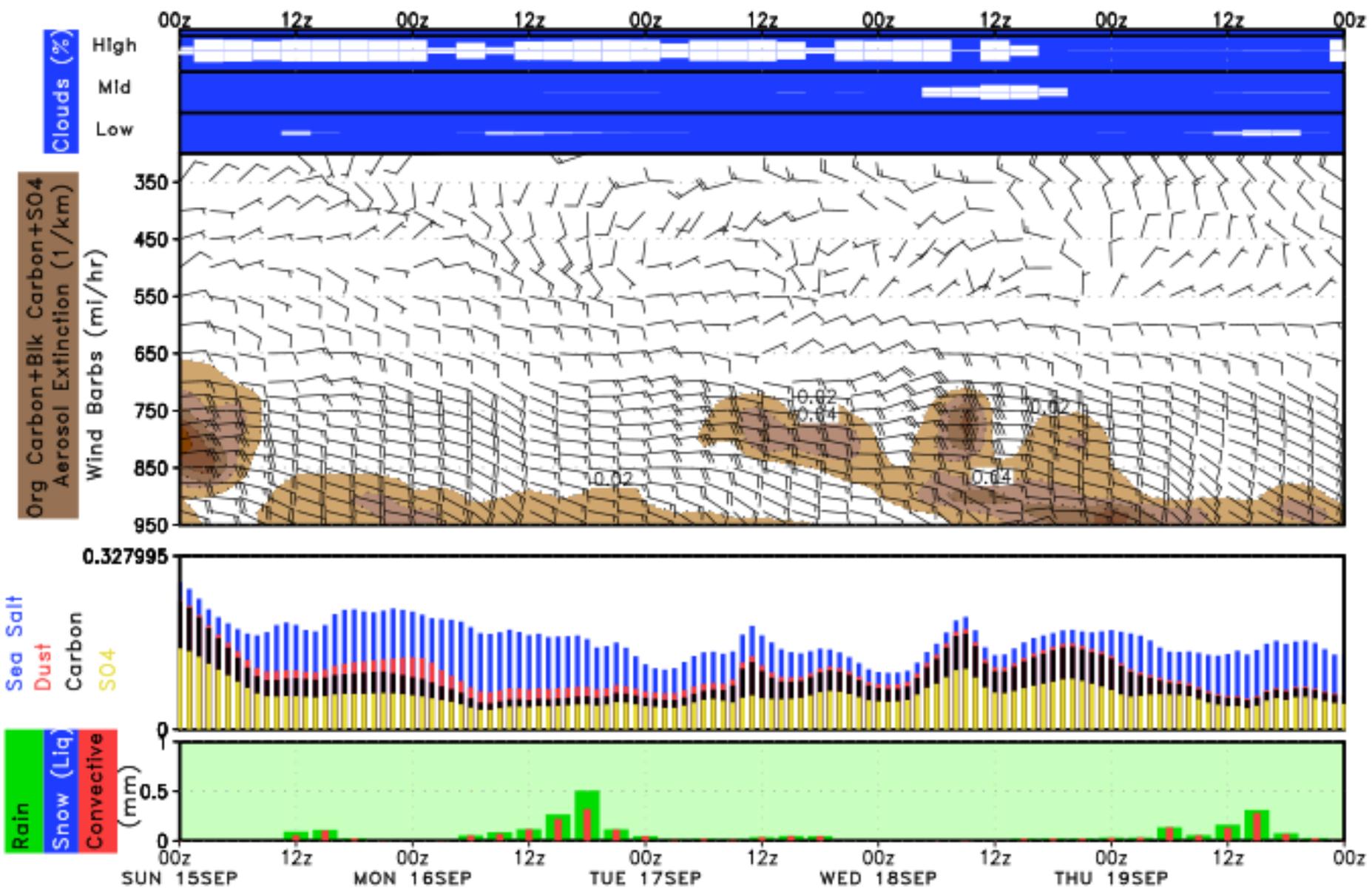
Wednesday 1pm



CONROE

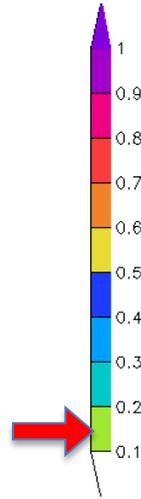
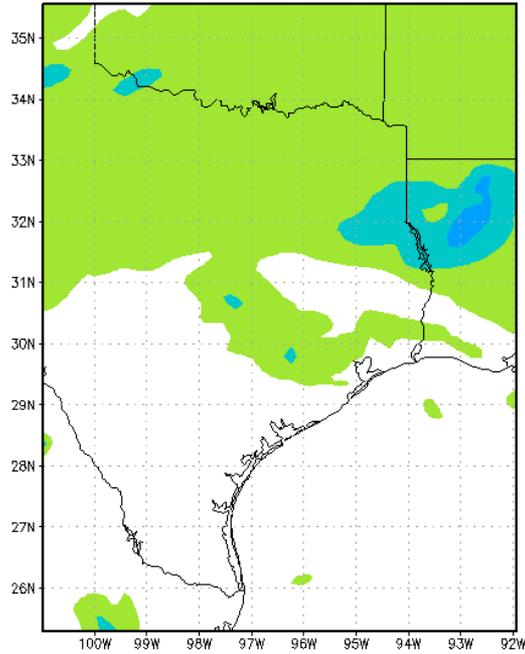


GALVESTON



(dev) aot 32H VALID 14Z 16 SEP2013 [dimensionless]

2 pm

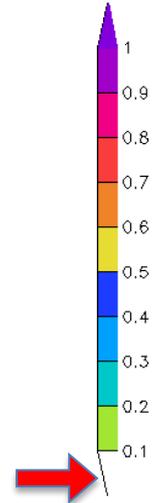
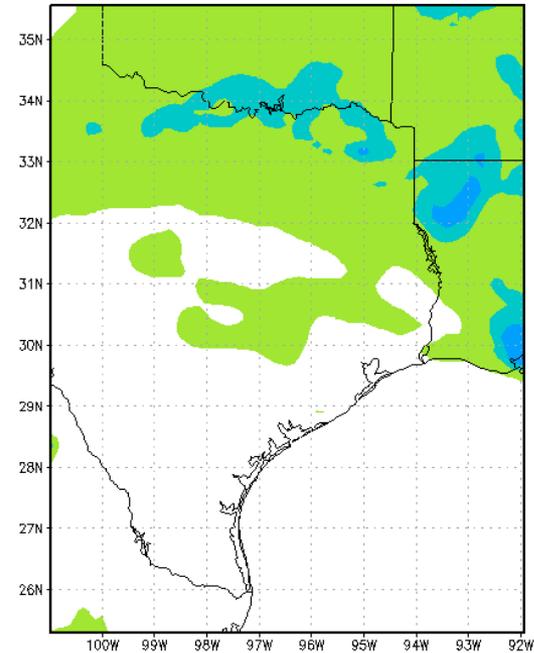


MONDAY

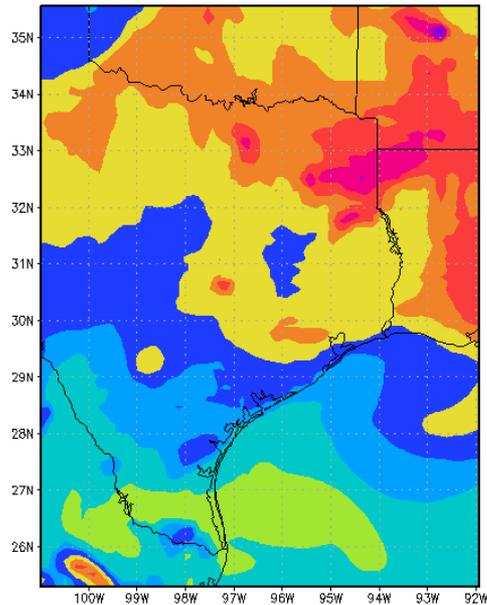
NOAA Experimental CMAQ AOT

(dev) aot 40H VALID 22Z 16 SEP2013 [dimensionless]

5 pm



9 am (dev) sfc pm25 32H VALID 14Z 16 SEP2013 [$\mu\text{g}/\text{m}^3$]

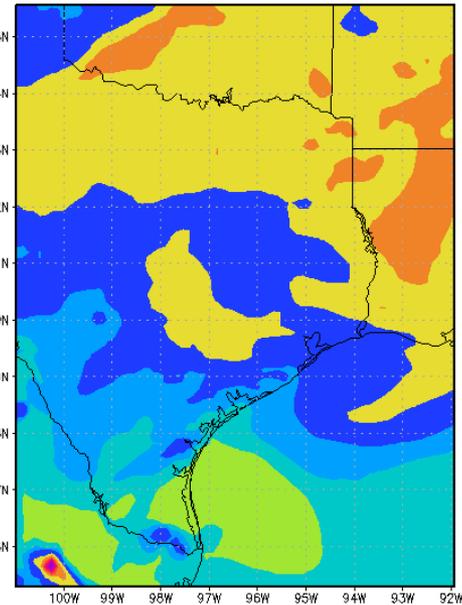


MONDAY

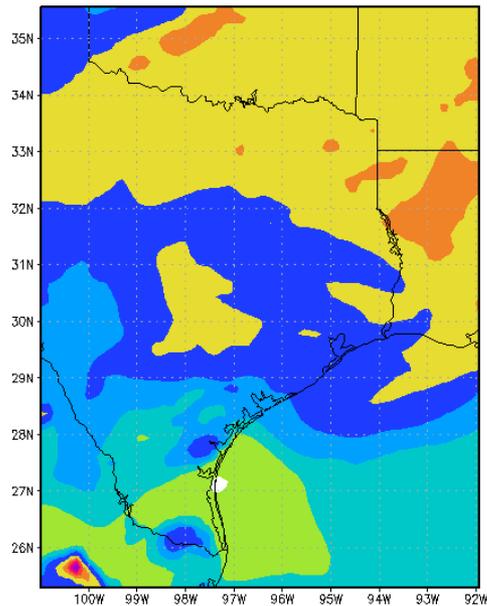
NOAA
Experimental
CMAQ Surface
Pm 2.5

(dev) sfc pm25 35H VALID 17Z 16 SEP2013 [$\mu\text{g}/\text{m}^3$]

noon

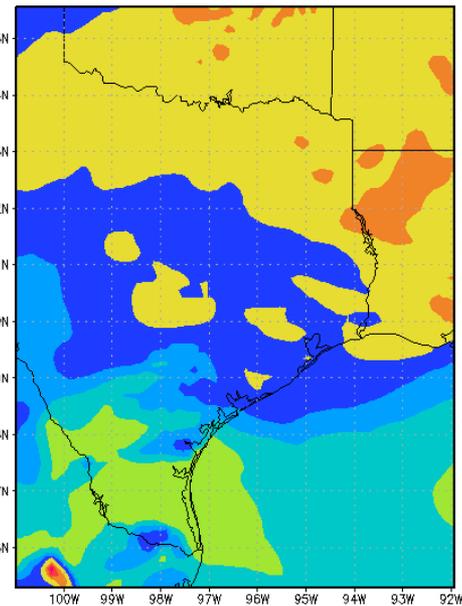


2 pm (dev) sfc pm25 37H VALID 19Z 16 SEP2013 [$\mu\text{g}/\text{m}^3$]



(dev) sfc pm25 40H VALID 22Z 16 SEP2013 [$\mu\text{g}/\text{m}^3$]

5 pm



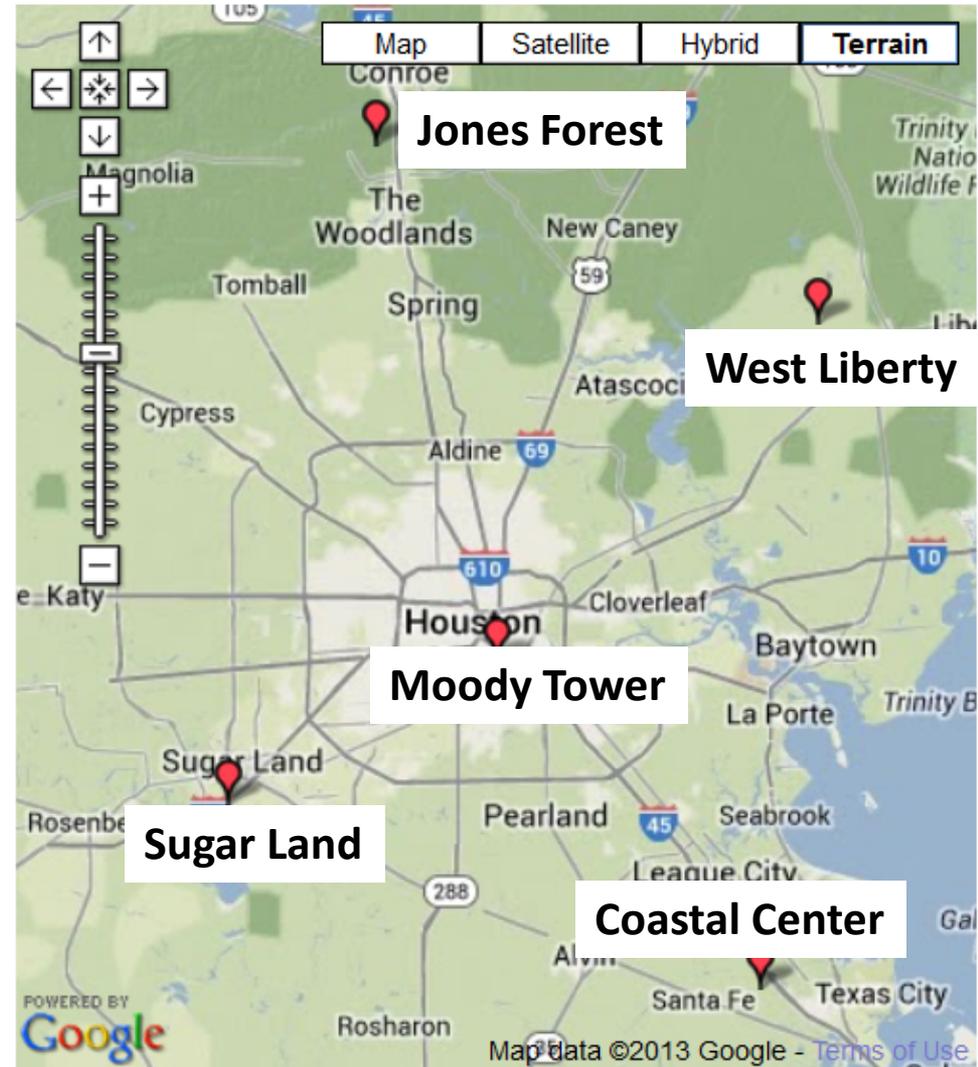
Houston - Network of Environmental Towers (H-NET)

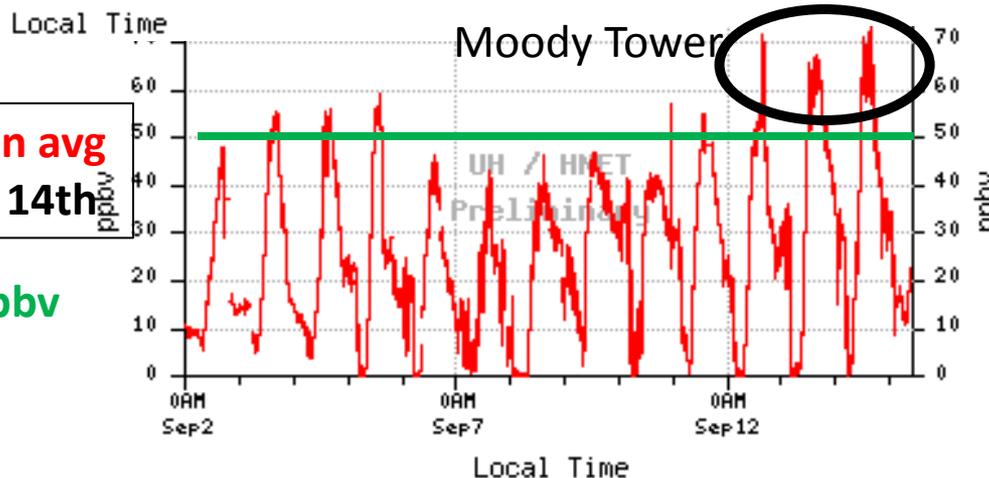
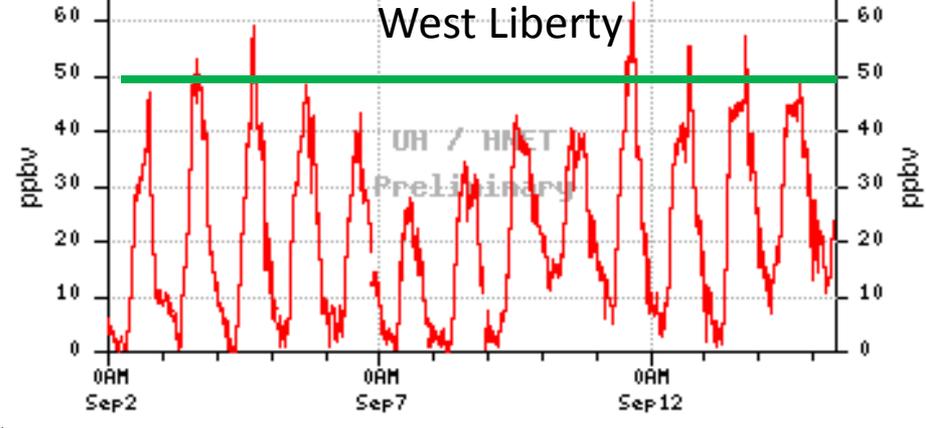
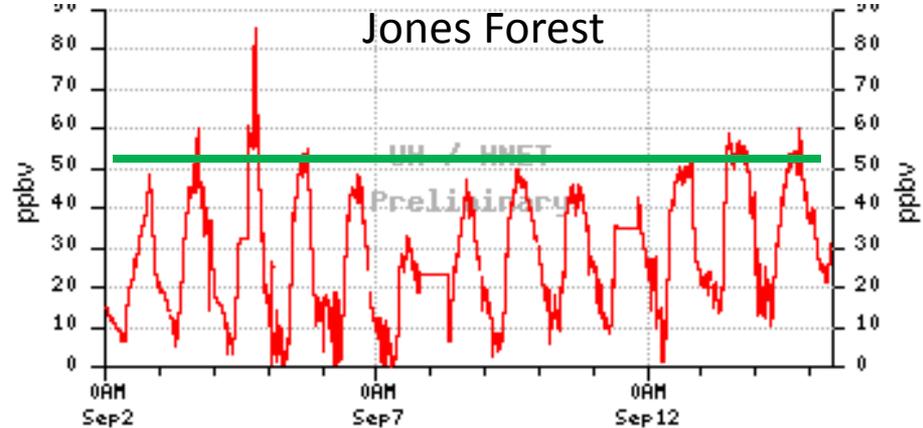
Houston Network of Environmental Towers (H-NET) collect chemistry and meteorological measurements for air quality model applications in Houston Galveston Area. This web site provides real-time update of collected data, as well as historical data.

Currently, **five sites** have been set up in

- **UH - Main Campus** (695)
- **Jones State Forest** (698)
- **West Liberty Airport** (699)
- **UH - Sugar Land** (696)
- **UH - Coastal Center** (697)

[More about this project.](#)



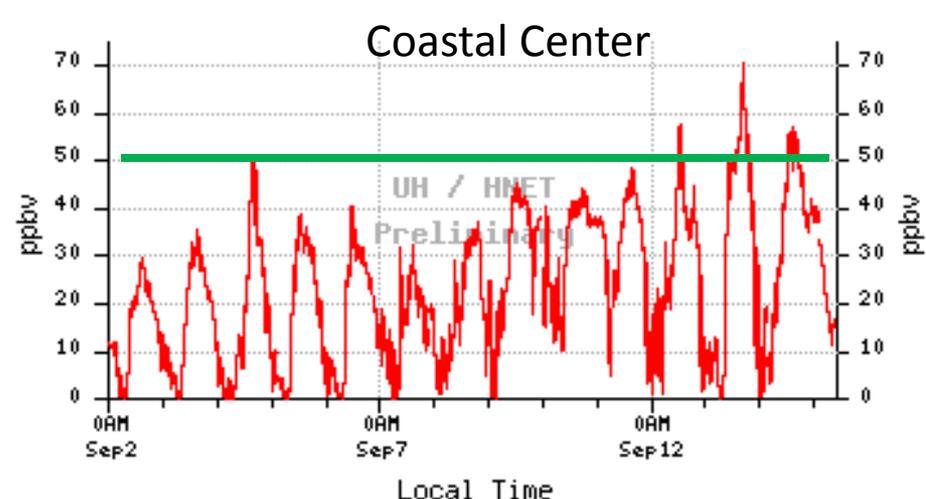
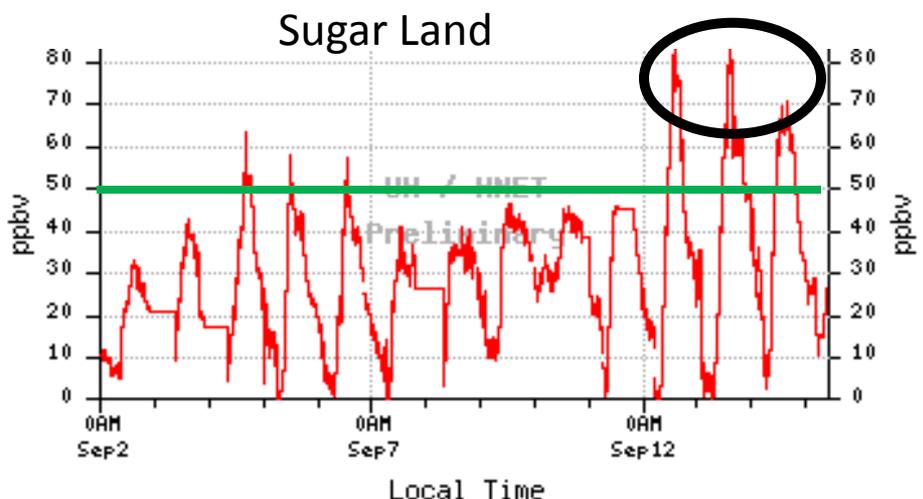


Local Time

Houston – Network of Environmental Towers (H-NET)

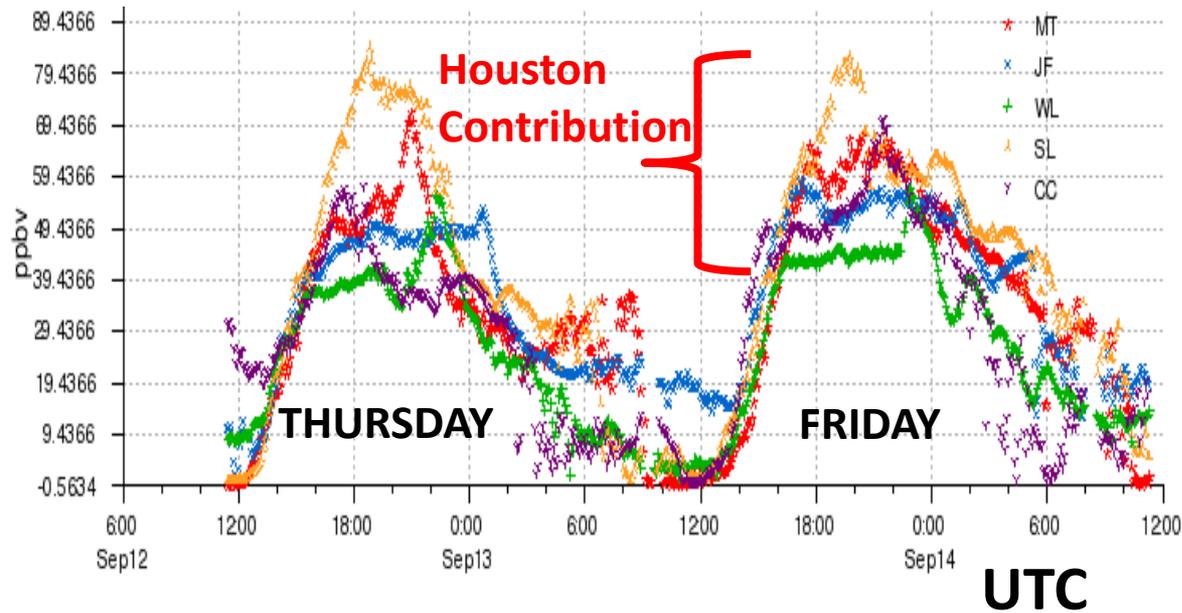
O₃ (ppbv) – 15 min avg
September 2nd – 14th

— = 50 ppbv

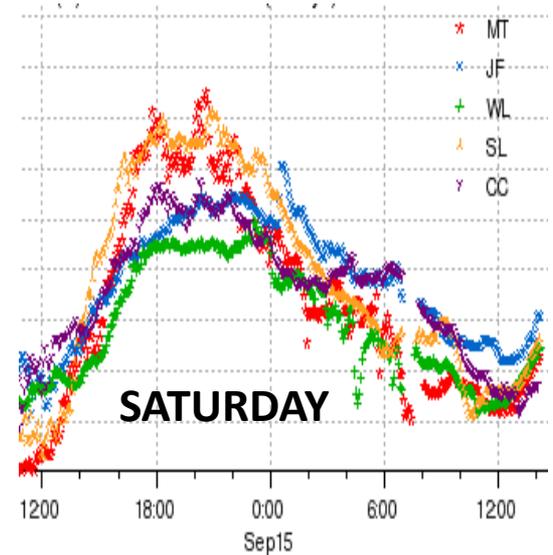


HNET

Ozone (ppbv)

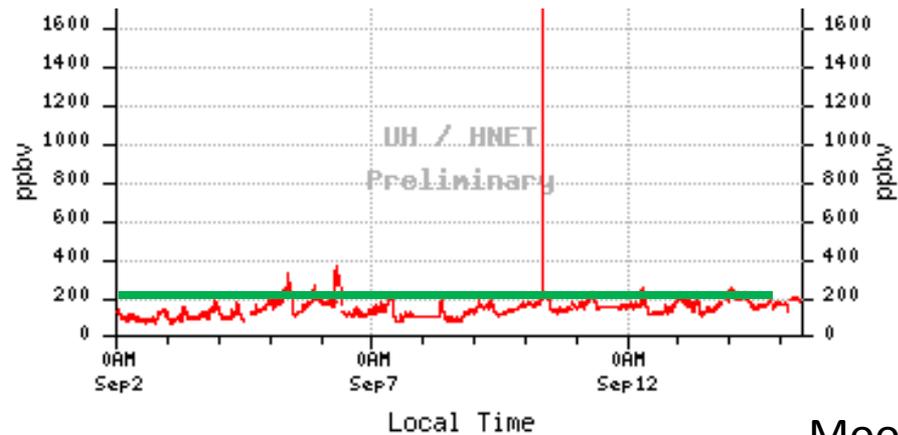


NE & E flow yesterday Sugarland-West Liberty ~ 35-40 ppbv

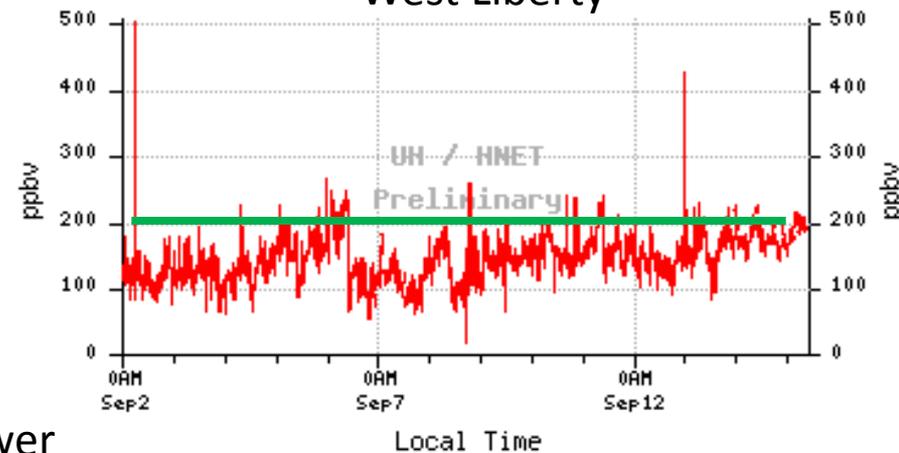


Variable & sometimes gusty winds.

Jones Forest



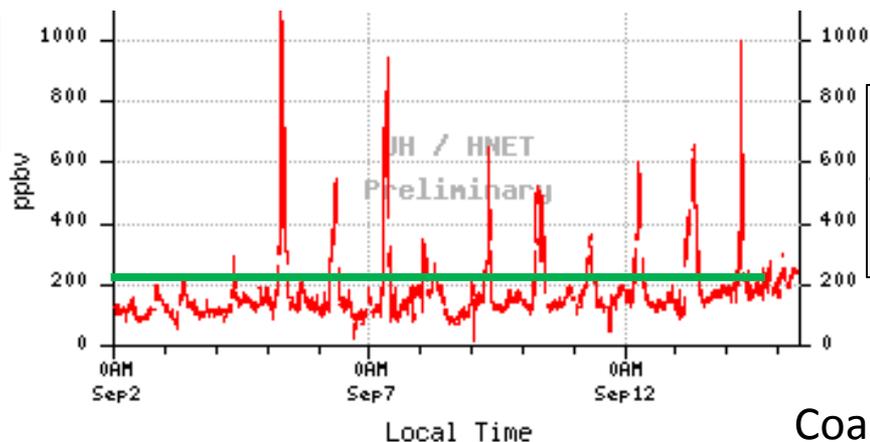
West Liberty



CO (ppbv) – 15 min avg
September 2nd – 14th

———— = 200 ppbv

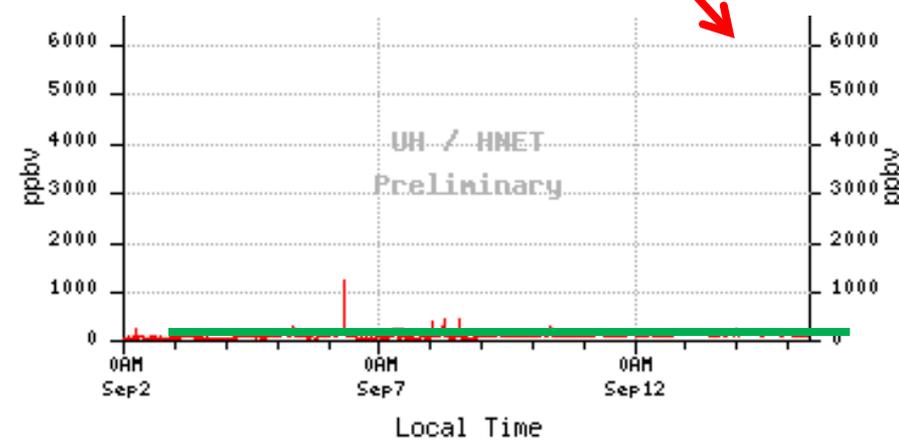
Moody Tower



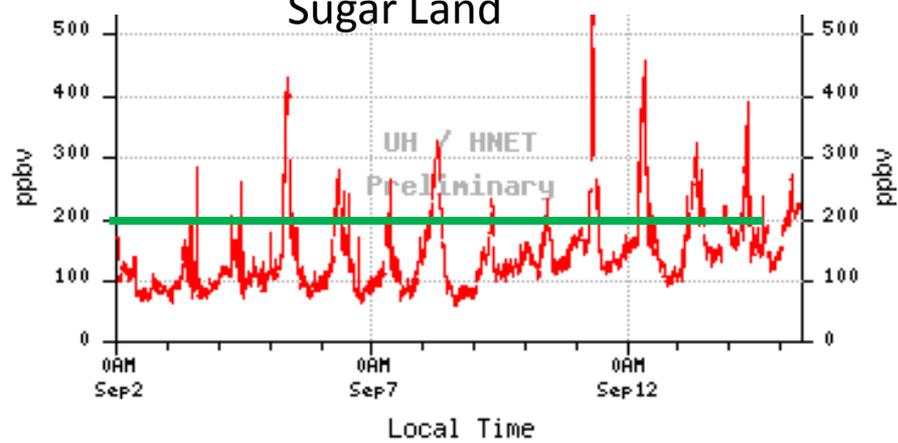
Houston – Network of Environmental Towers (H-NET)

Huh?

Coastal Center

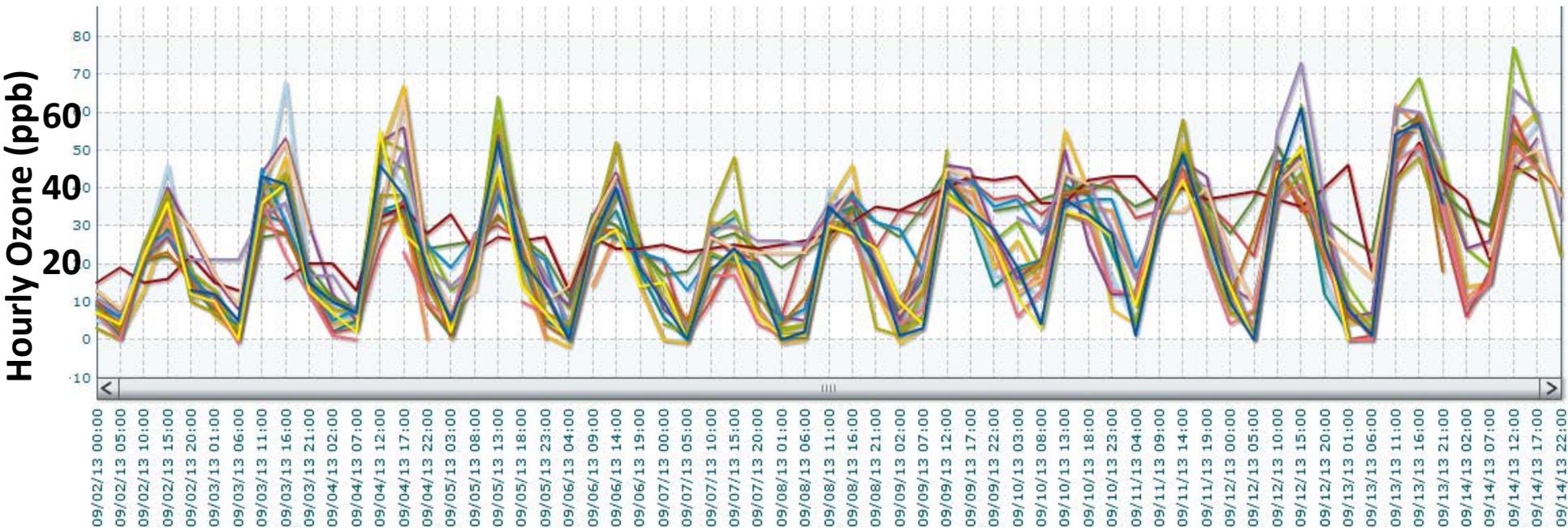


Sugar Land



Hourly Ozone (airnowtech.org)**

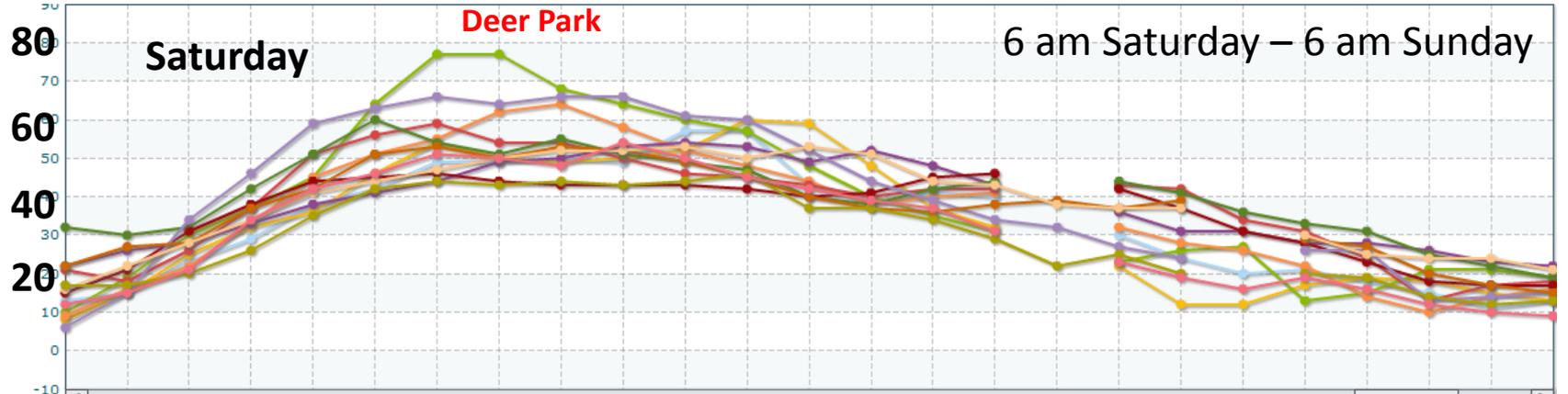
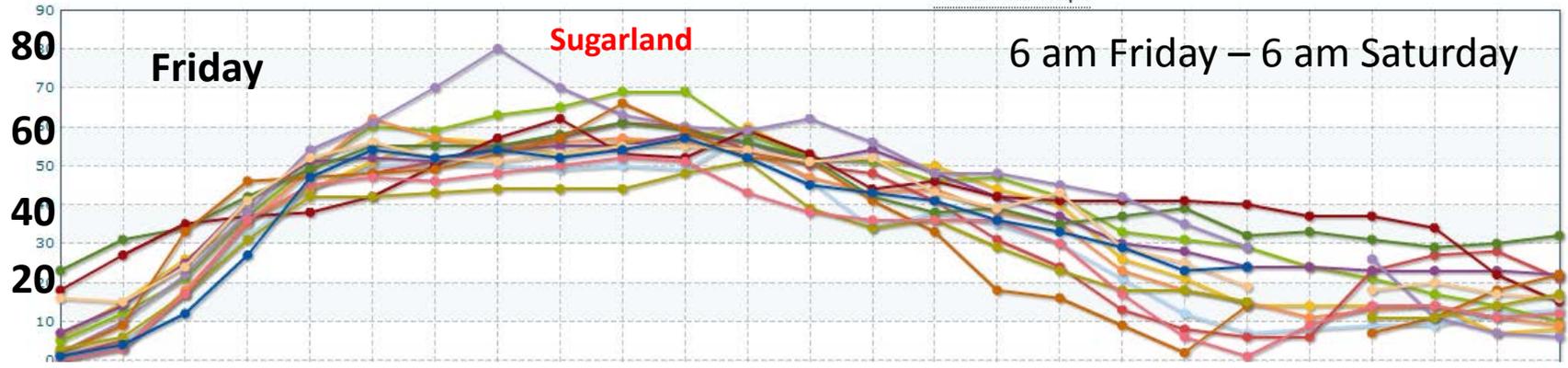
September 2nd – 14th ** EVERY 5th HOUR PLOTTED!!!!



- | | |
|---|---|
| ◆ Houston Aldine C8/O3 - 44201/1 Hr/2 | ◆ Northwest Harris Co. C26/C110/C154/O3 - 44201/1 Hr/2 |
| ◆ Houston Westhollow C410/O3 - 44201/1 Hr/1 | ◆ Houston Deer Park C35/O3 - 44201/1 Hr/1 |
| ◆ Manvel Croix Park C84/O3 - 44201/1 Hr/1 | ◆ Seabrook Friendship Park C45/O3 - 44201/1 Hr/1 |
| ◆ Conroe Relocated C78/O3 - 44201/1 Hr/1 | ◆ Texas City C620/O3 - 44201/1 Hr/1 |
| ◆ West Houston C554/O3 - 44201/1 Hr/1 | ◆ La Porte Sylvan Beach C556/O3 - 44201/1 Hr/1 |
| ◆ Galveston Airport C1034/O3 - 44201/1 Hr/1 | ◆ Sugarland C696/O3 - 44201/1 Hr/1 |
| ◆ Coastal Center C697/O3 - 44201/1 Hr/1 | ◆ Jones Forest C698/O3 - 44201/1 Hr/1 |
| ◆ West Liberty C699/O3 - 44201/1 Hr/1 | ◆ Channelview C15/O3 - 44201/1 Hr/3 |
| ◆ Clinton C403/O3 - 44201/1 Hr/3 | ◆ Houston Texas Avenue C411/O3 - 44201/1 Hr/1 (Method: 047) |

Hourly Ozone (airnowtech.org)

Reset Line Graph



- ◆ Houston Aldine C8/O3 - 44201/1 Hr/2
- ◆ Houston Westhollow C410/O3 - 44201/1 Hr/1
- ◆ Manvel Croix Park C84/O3 - 44201/1 Hr/1
- ◆ Conroe Relocated C78/O3 - 44201/1 Hr/1
- ◆ West Houston C554/O3 - 44201/1 Hr/1
- ◆ Galveston Airport C1034/O3 - 44201/1 Hr/1
- ◆ Coastal Center C697/O3 - 44201/1 Hr/1
- ◆ West Liberty C699/O3 - 44201/1 Hr/1
- ◆ Clinton C403/O3 - 44201/1 Hr/3
- ◆ Northwest Harris Co. C26/C110/C154/O3 - 44201/1 Hr/2
- ◆ Houston Deer Park C35/O3 - 44201/1 Hr/1
- ◆ Seabrook Friendship Park C45/O3 - 44201/1 Hr/1
- ◆ Texas City C620/O3 - 44201/1 Hr/1
- ◆ La Porte Sylvan Beach C556/O3 - 44201/1 Hr/1
- ◆ Sugarland C696/O3 - 44201/1 Hr/1
- ◆ Jones Forest C698/O3 - 44201/1 Hr/1
- ◆ Channelview C15/O3 - 44201/1 Hr/3
- ◆ Houston Texas Avenue C411/O3 - 44201/1 Hr/1 (Method: 047)

TCEQ AQ Forecast (Ozone) : Not updated since Friday

TODAY: Code Yellow

“If incoming background levels are high enough, winds may be light enough for ozone to reach "Moderate" levels on the west and northwest side of the Houston area.”

MONDAY-TUESDAY: Code Green – Good

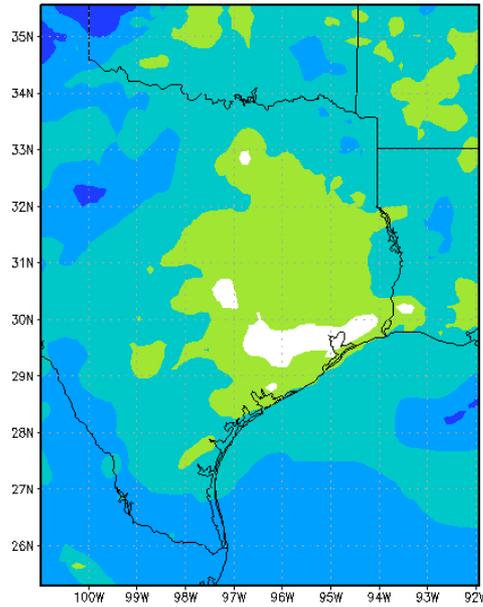
PM2.5 will continue in the low end of the moderate range.

O3 [ppb] at 1013 [hPa] Valid 14Z SEP 16 2013

1013 hPa

O3 [ppb] at 1013 [hPa] Valid 17Z SEP 16 2013

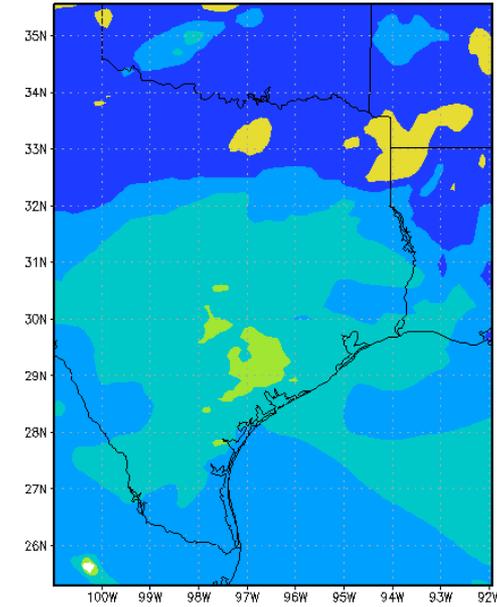
9 am



noon

**NOAA
Experim.
CMAQ

Surface
Ozone**



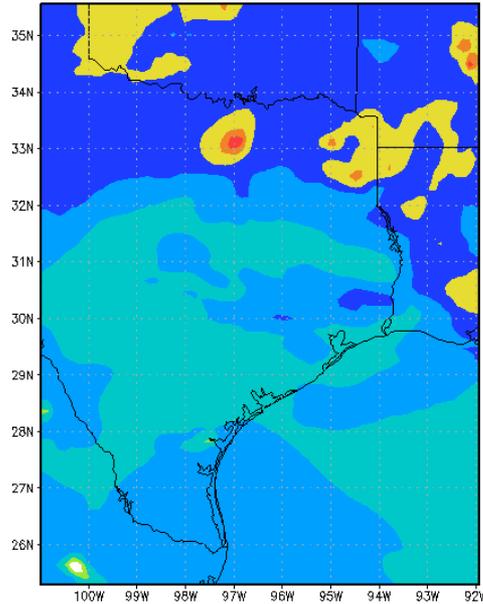
GRADS: COLA/IGES

GRADS: COLA/IGES

O3 [ppb] at 1013 [hPa] Valid 19Z SEP 16 2013

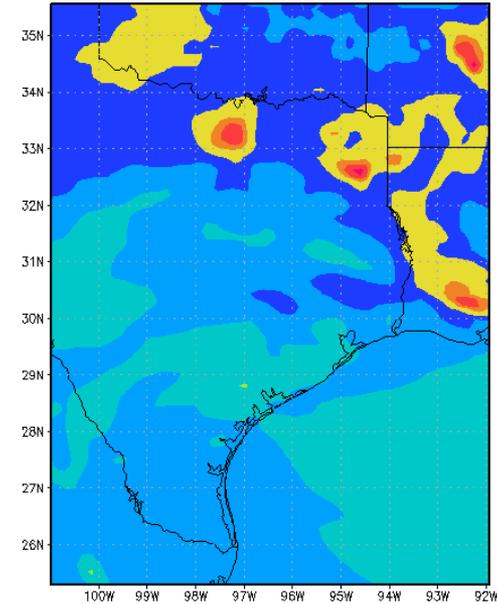
O3 [ppb] at 1013 [hPa] Valid 22Z SEP 16 2013

2 pm



5 pm

MONDAY

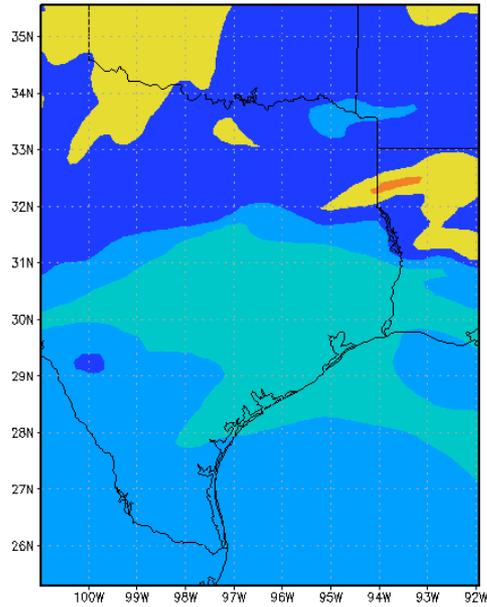


GRADS: COLA/IGES

GRADS: COLA/IGES

O3 [ppb] at 850 [hPa] Valid 14Z SEP 16 2013

9 am

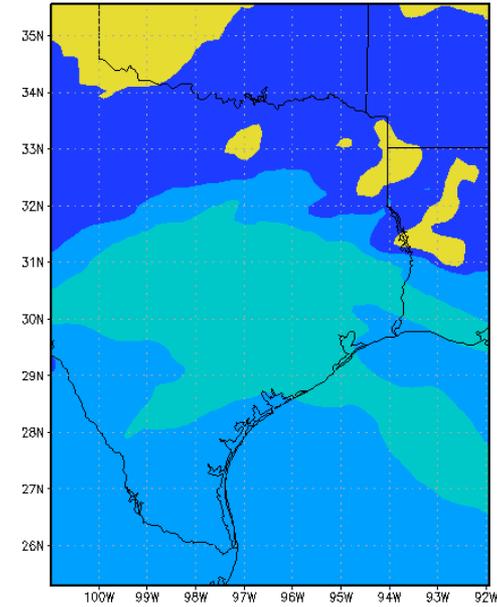


850 hPa

noon

NOAA
 Experim.
 CMAQ
 1.5 Km
 Ozone

O3 [ppb] at 850 [hPa] Valid 17Z SEP 16 2013

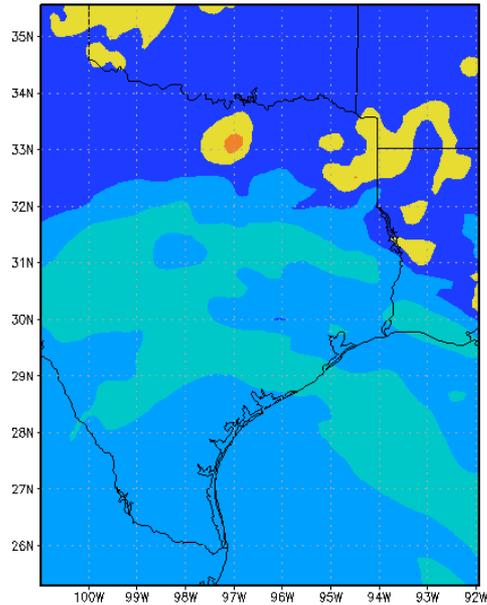


GRADS: COLA/IGES

GRADS: COLA/IGES

O3 [ppb] at 850 [hPa] Valid 19Z SEP 16 2013

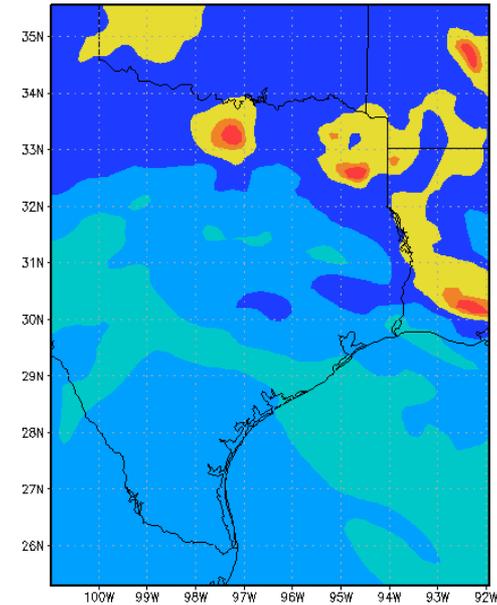
2 pm



O3 [ppb] at 850 [hPa] Valid 22Z SEP 16 2013

5 pm

MONDAY



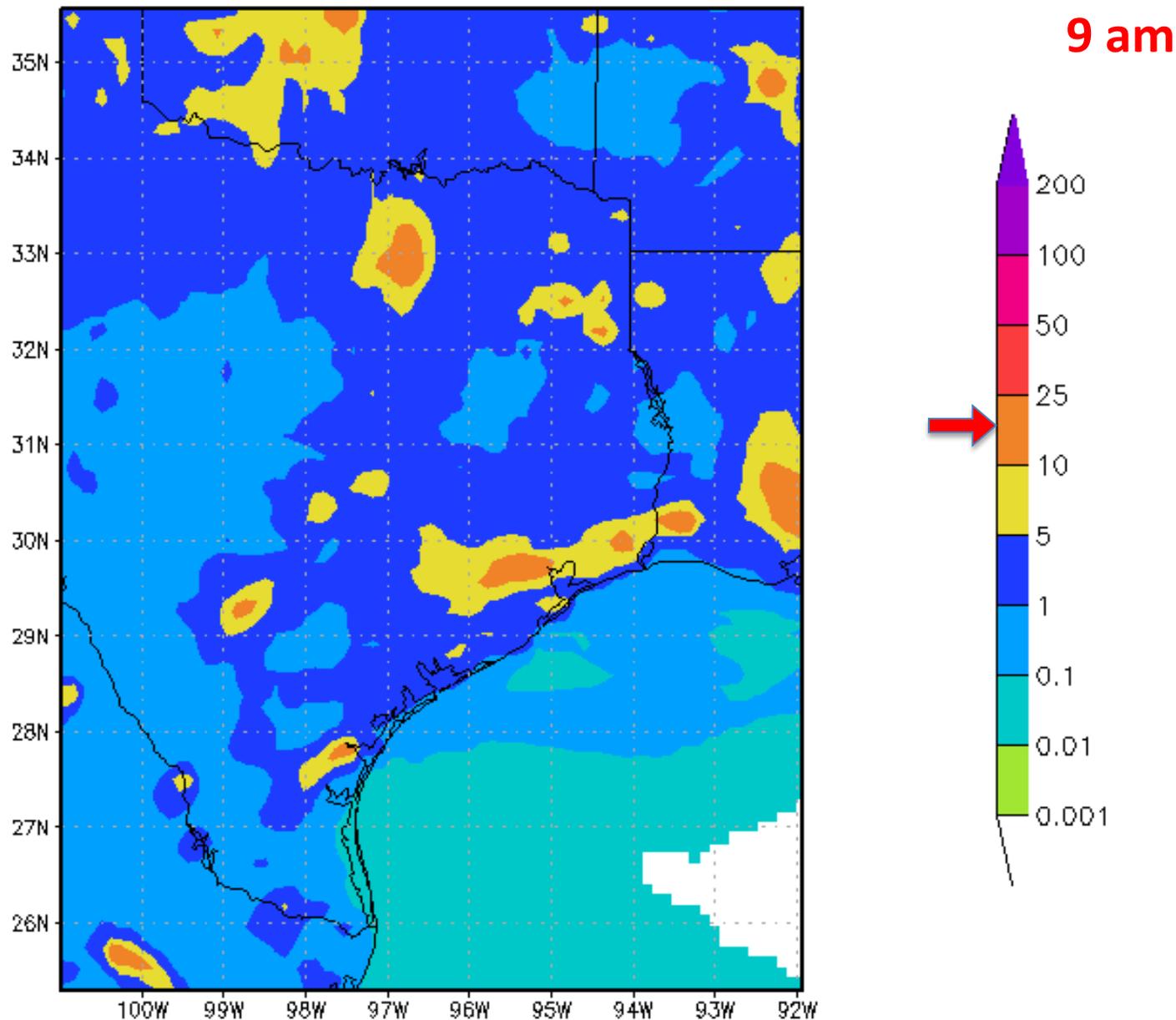
GRADS: COLA/IGES

GRADS: COLA/IGES

NO2 [ppb] at 1013 [hPa] Valid 14Z SEP 16 2013

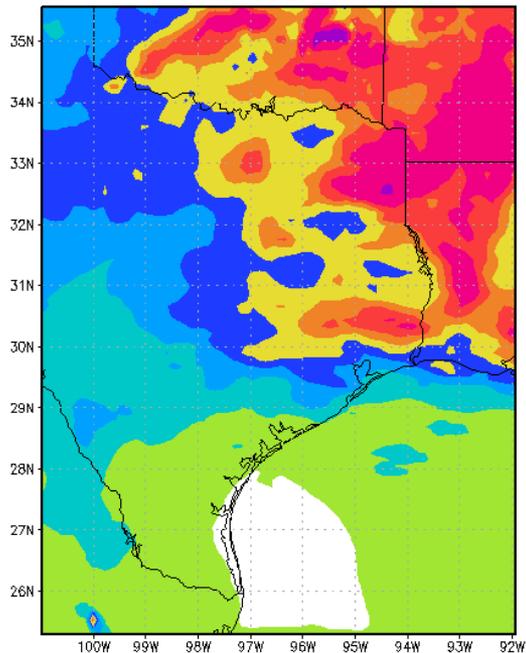
NOAA Experm.
CMAQ Model
Surface NO2

MONDAY



FORM [ppb] at 1013 [hPa] Valid 19Z SEP 16 2013

2 pm

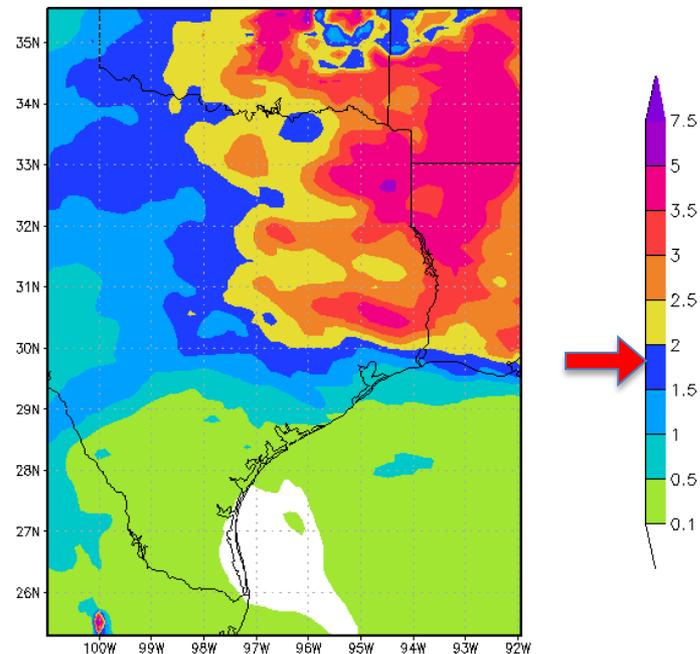


MONDAY

NOAA Experm. CMAQ Model
Surface Formaldehyde

FORM [ppb] at 1013 [hPa] Valid 22Z SEP 16 2013

5 pm



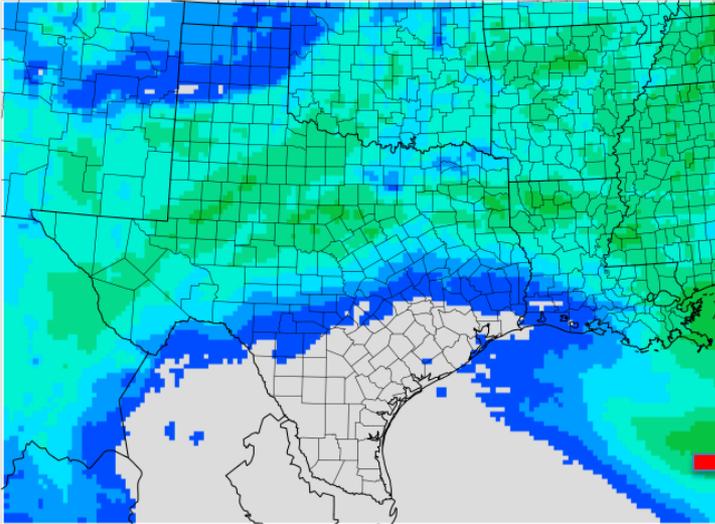
9 am

Ozone
Best Case

MONDAY

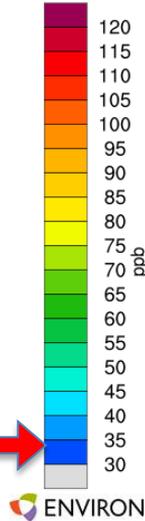
Ozone
Best Case

noon

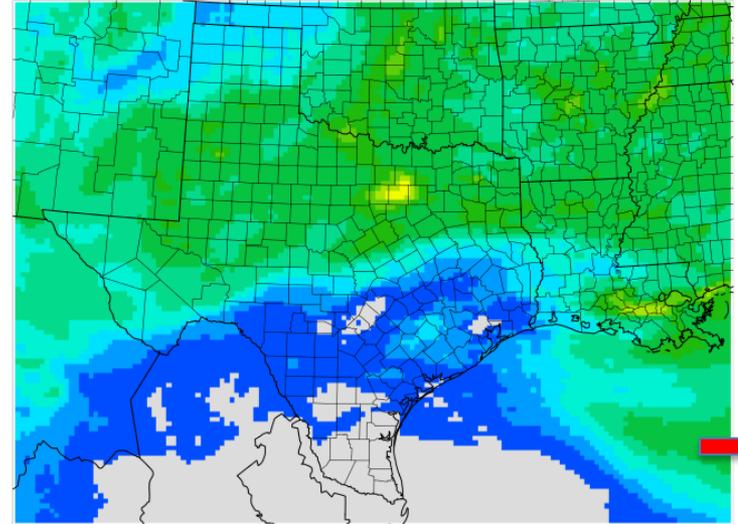


Min(54,4) = 0.9, Max(145,49) = 58.4

Mon September 16 09:00 CST

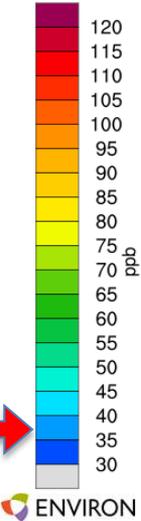


ENVIRON



Min(52,2) = 1.1, Max(81,70) = 78.0

Mon September 16 12:00 CST



ENVIRON

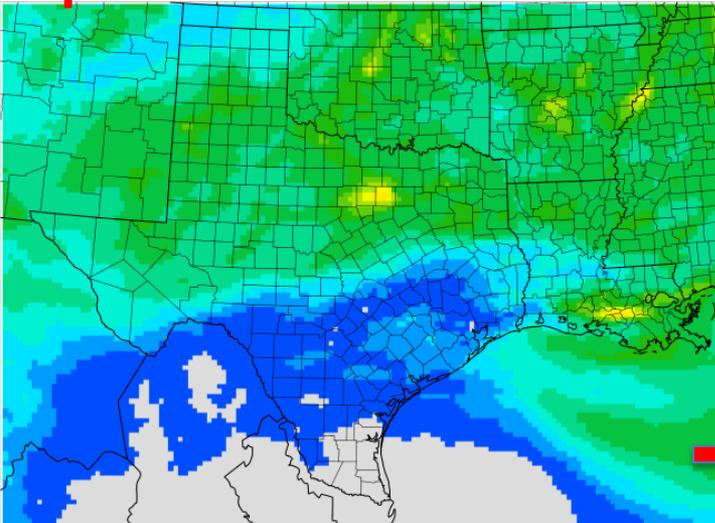
CAMx Model Surface Ozone

2 pm

Ozone
Best Case

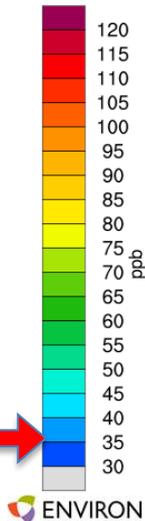
Ozone
Best Case

5 pm

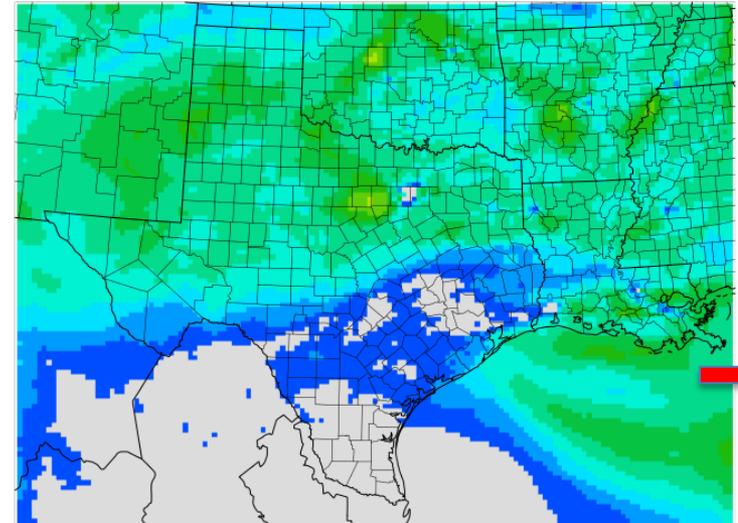


Min(54,3) = 0.2, Max(79,70) = 83.1

Mon September 16 14:00 CST

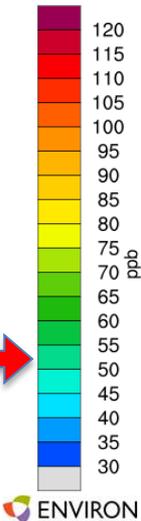


ENVIRON



Min(53,4) = 2.8, Max(75,98) = 71.2

Mon September 16 17:00 CST



ENVIRON

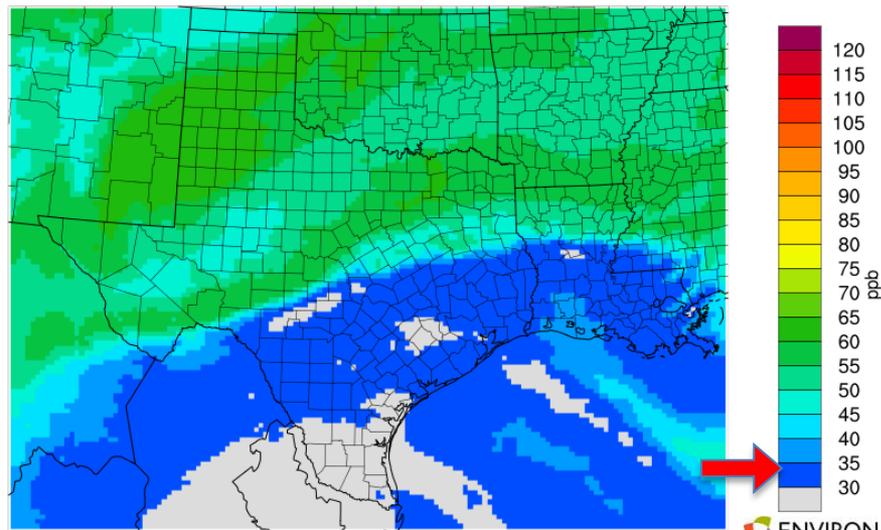
9 am

Ozone
Best Case: CAMx Layer 14

MONDAY

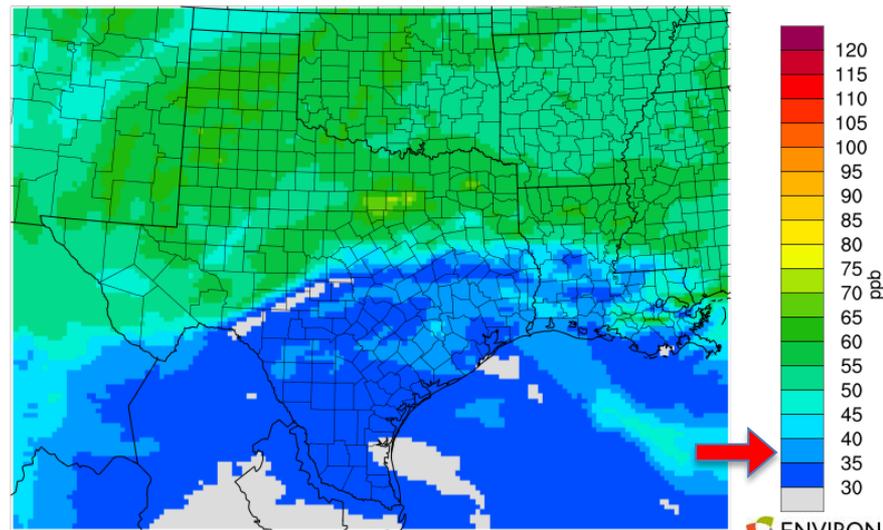
Ozone
Best Case: CAMx Layer 14

noon



Min(56,12) = 26.8, Max(36,73) = 64.9

Mon September 16 09:00 CST



Min(51,29) = 27.0, Max(80,70) = 70.2

Mon September 16 12:00 CST

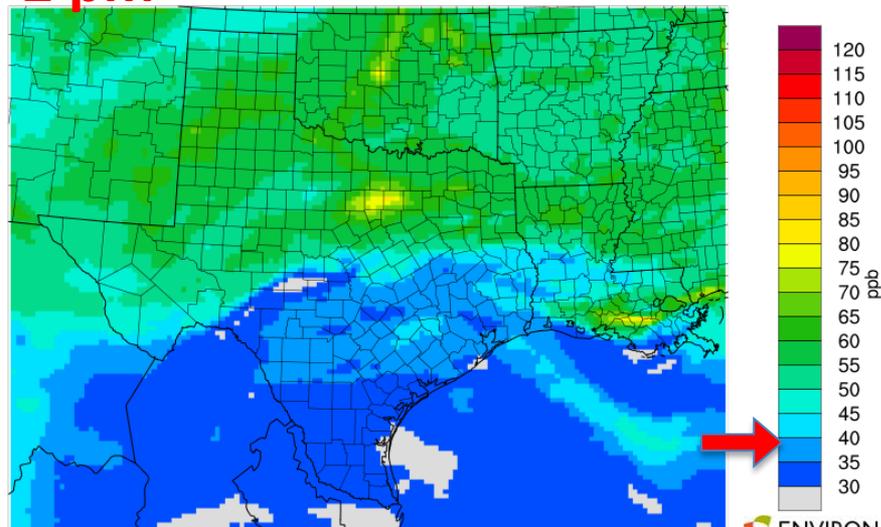
CAMx Model 1.2 km Ozone

2 pm

Ozone
Best Case: CAMx Layer 14

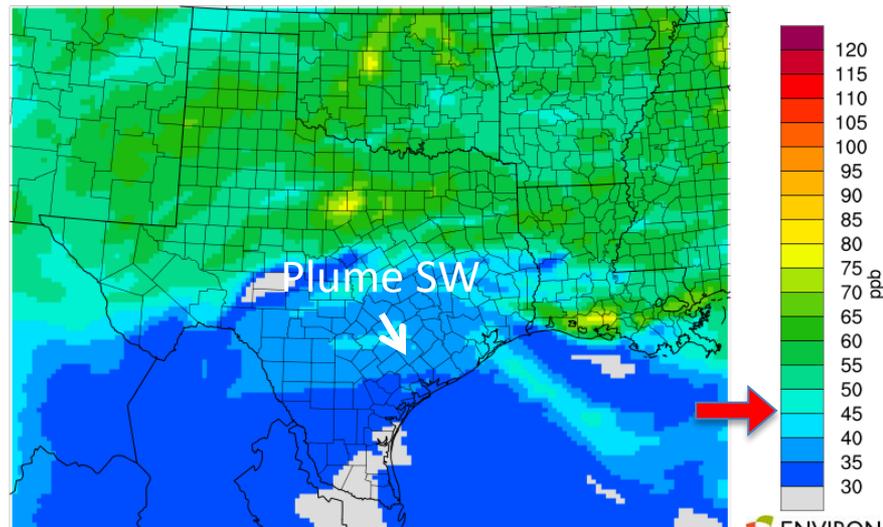
Ozone
Best Case: CAMx Layer 14

5 pm



Min(59,52) = 26.0, Max(132,45) = 81.6

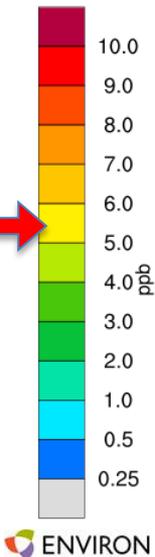
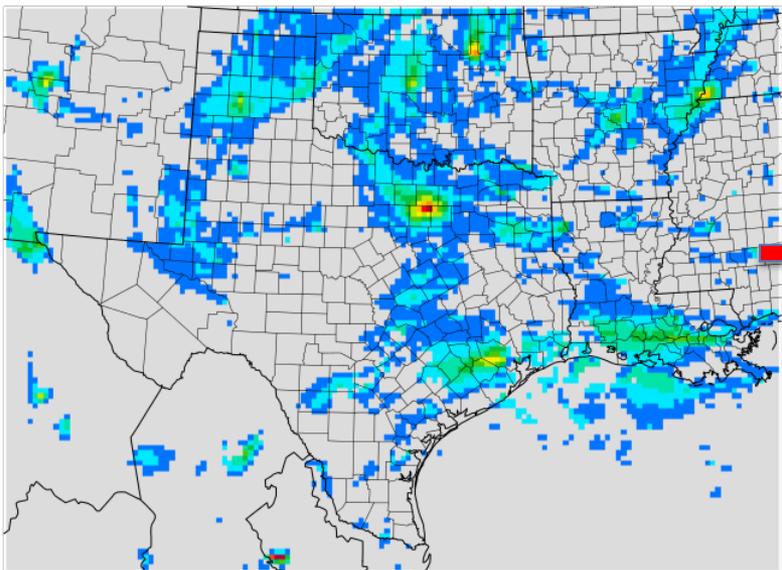
Mon September 16 14:00 CST



Min(55,53) = 24.6, Max(124,45) = 80.3

Mon September 16 17:00 CST

NO 9 am
Best Case



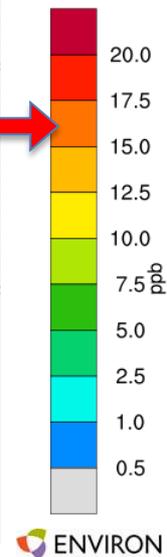
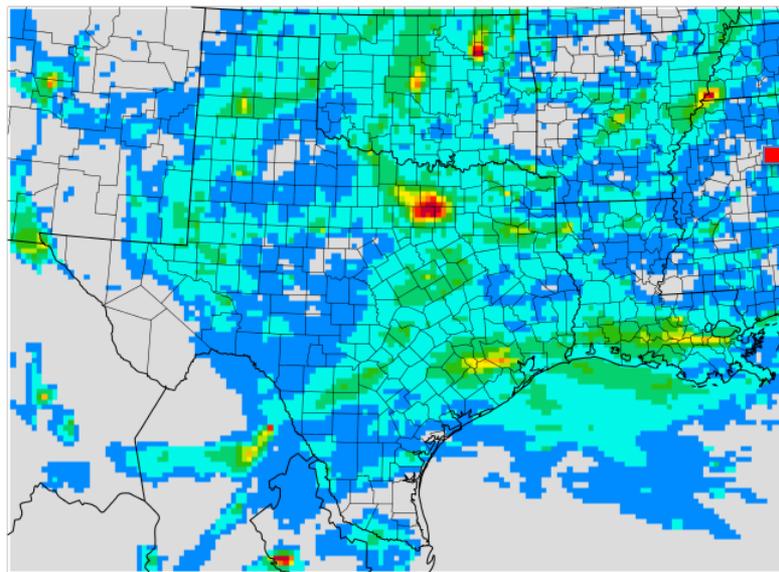
Min(83,3) = 0.0, Max(54,4) = 24.5
Mon September 16 09:00 CST

ENVIRON

MONDAY

CAMx Surface NO and NOx

NOx 9 am
Best Case

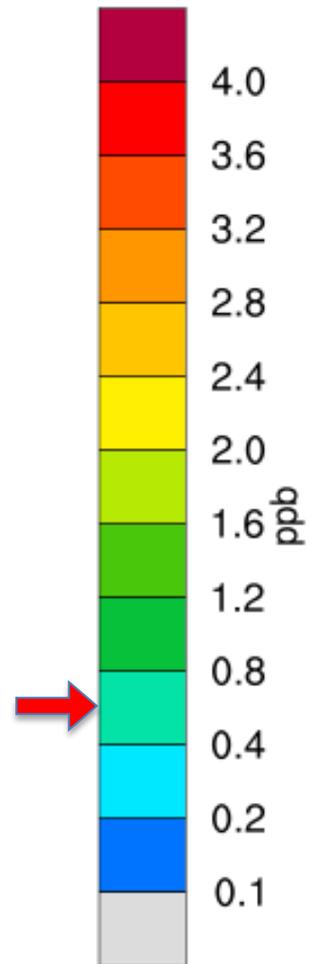
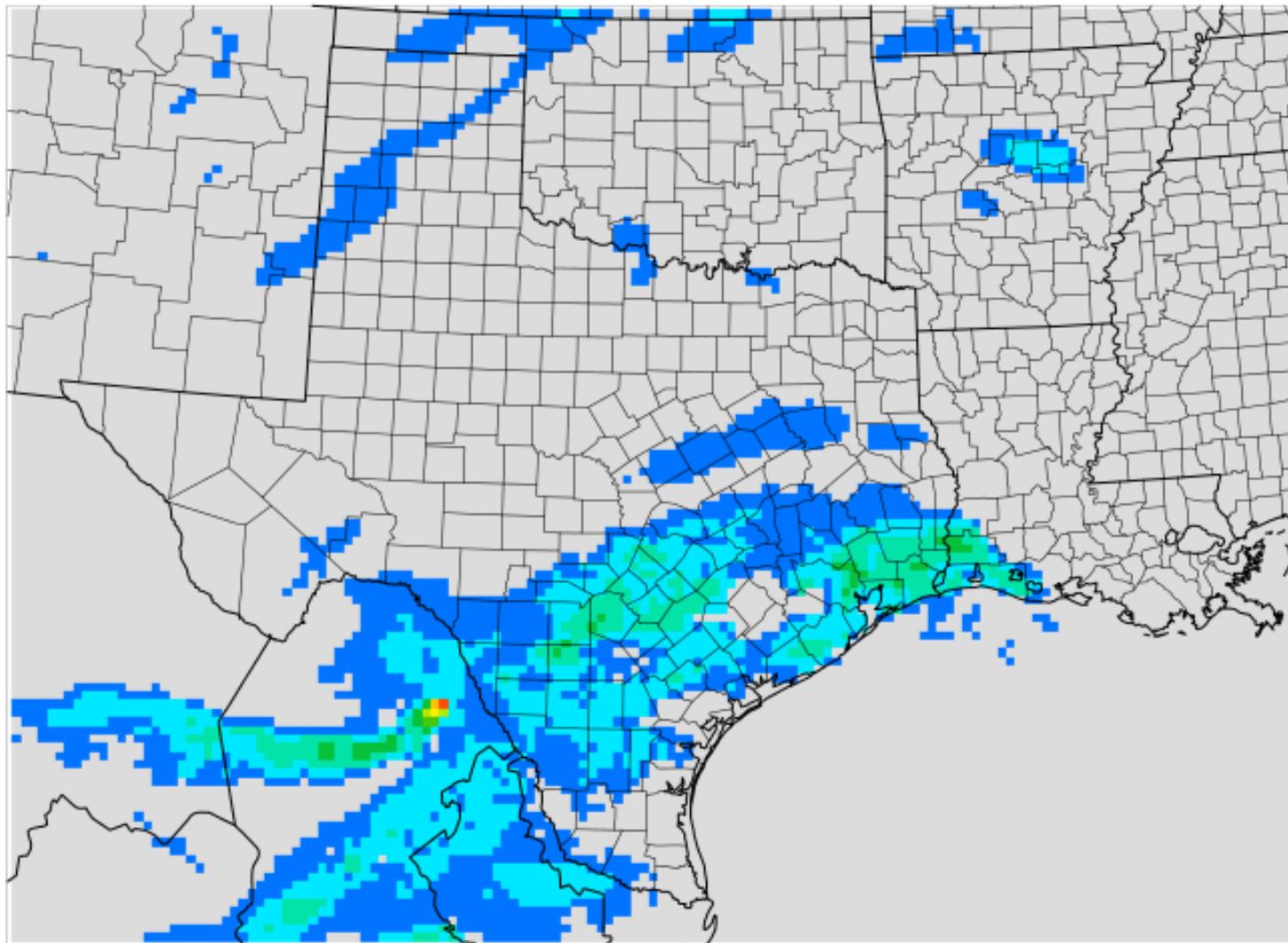


Min(2,15) = 0.1, Max(54,4) = 49.0
Mon September 16 09:00 CST

ENVIRON

NO₂

Best Case: CAMx Layer 14



Min(143,32) = 0.0, Max(51,29) = 3.4

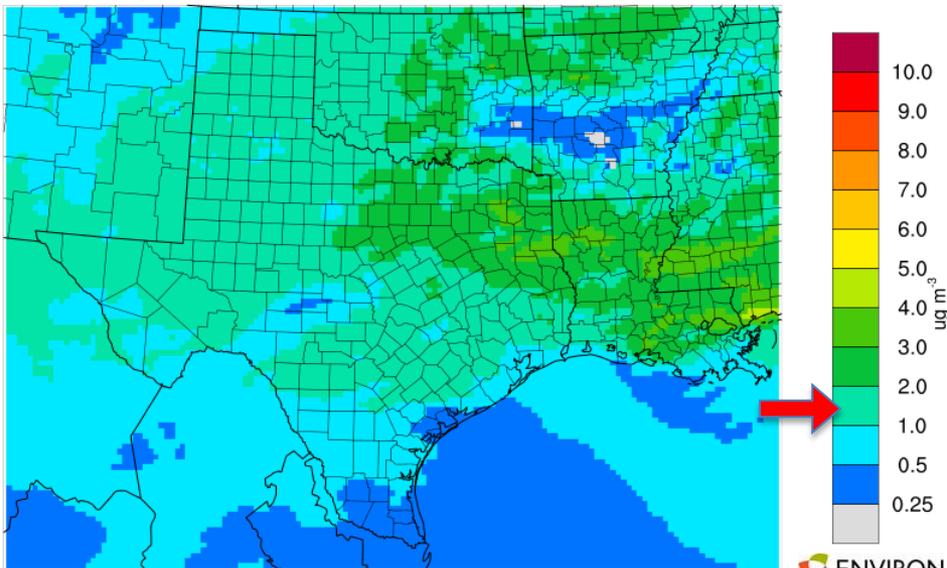
Mon September 16 09:00 CST

9 am

Formaldehyde

Best Case: CAMx Layer 14

2 pm



Min(115,84) = 0.1, Max(145,51) = 4.6

Mon September 16 14:00 CST



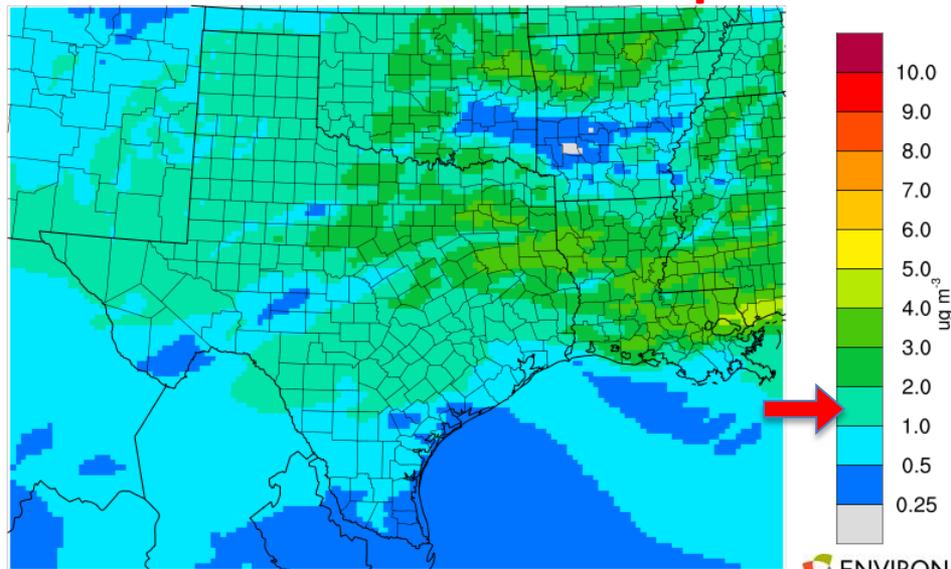
MONDAY

CAMx Model Formaldehyde 1.2 km (Layer 14)

Formaldehyde

Best Case: CAMx Layer 14

5 pm



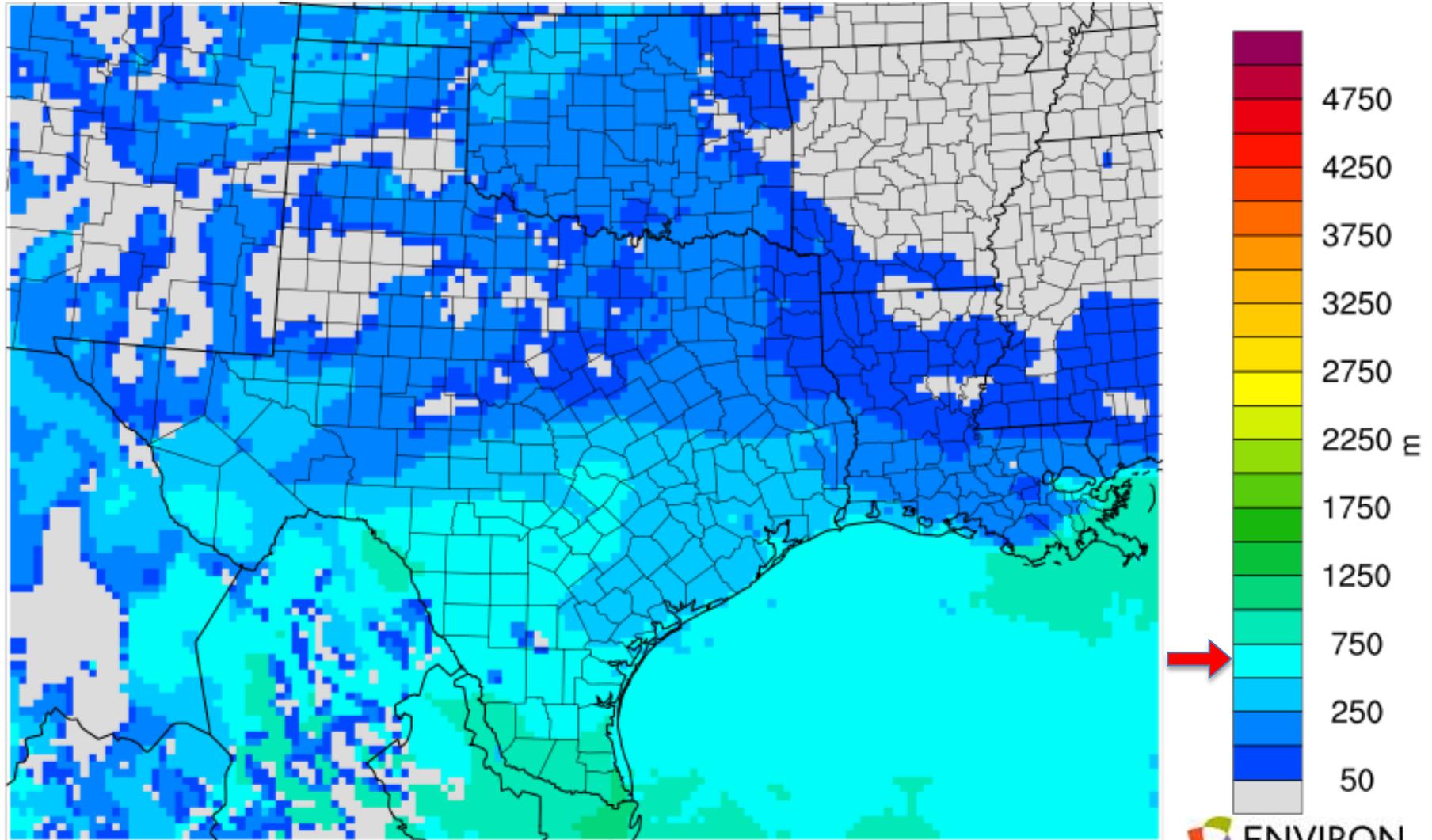
Min(109,83) = 0.2, Max(144,52) = 4.5

Mon September 16 17:00 CST



PBL Height

Texas 12km

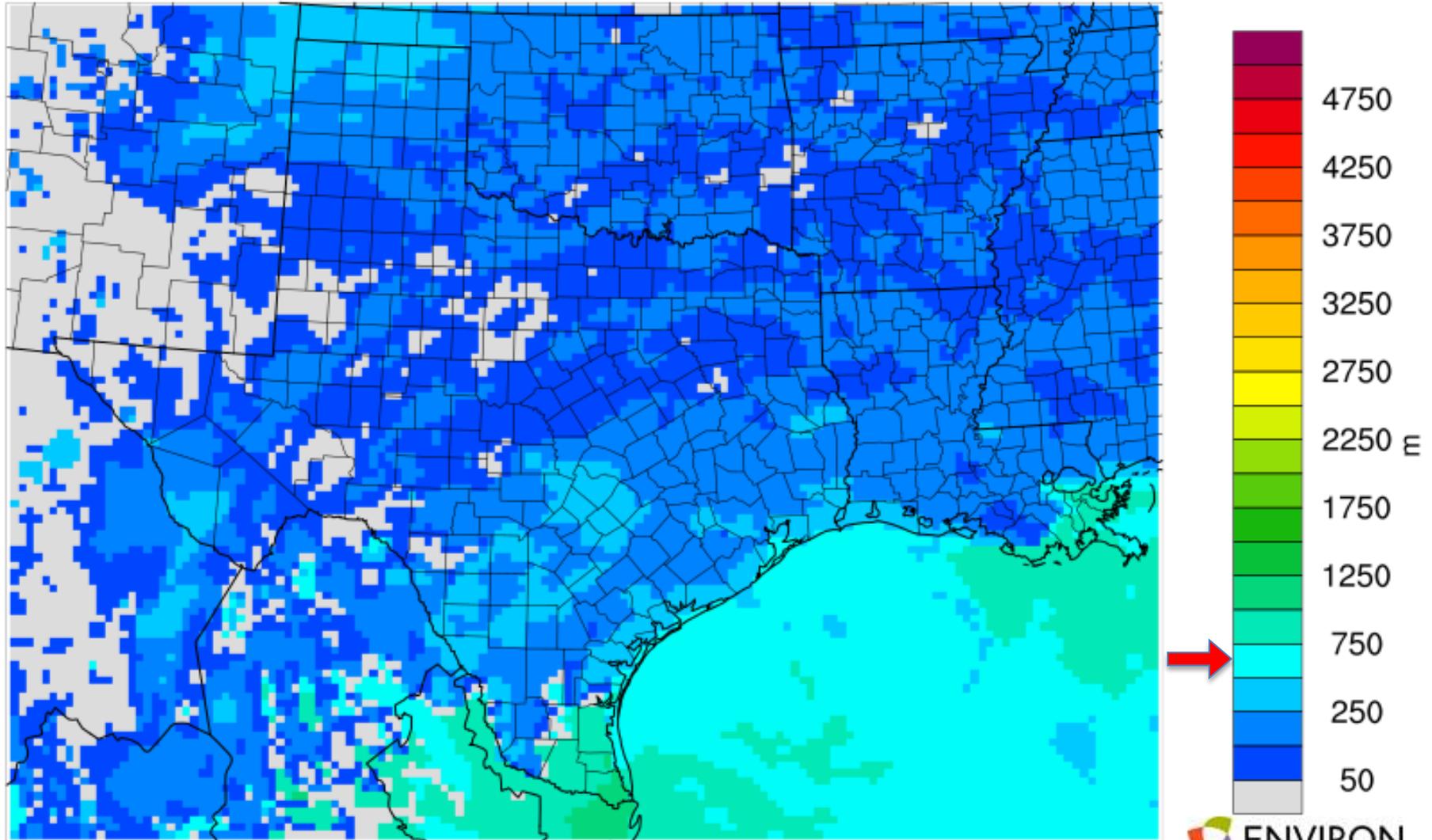


Min(14,108) = 15.6, Max(80,2) = 1196.3

Mon September 16 06:00 CST

PBL Height

Texas 12km

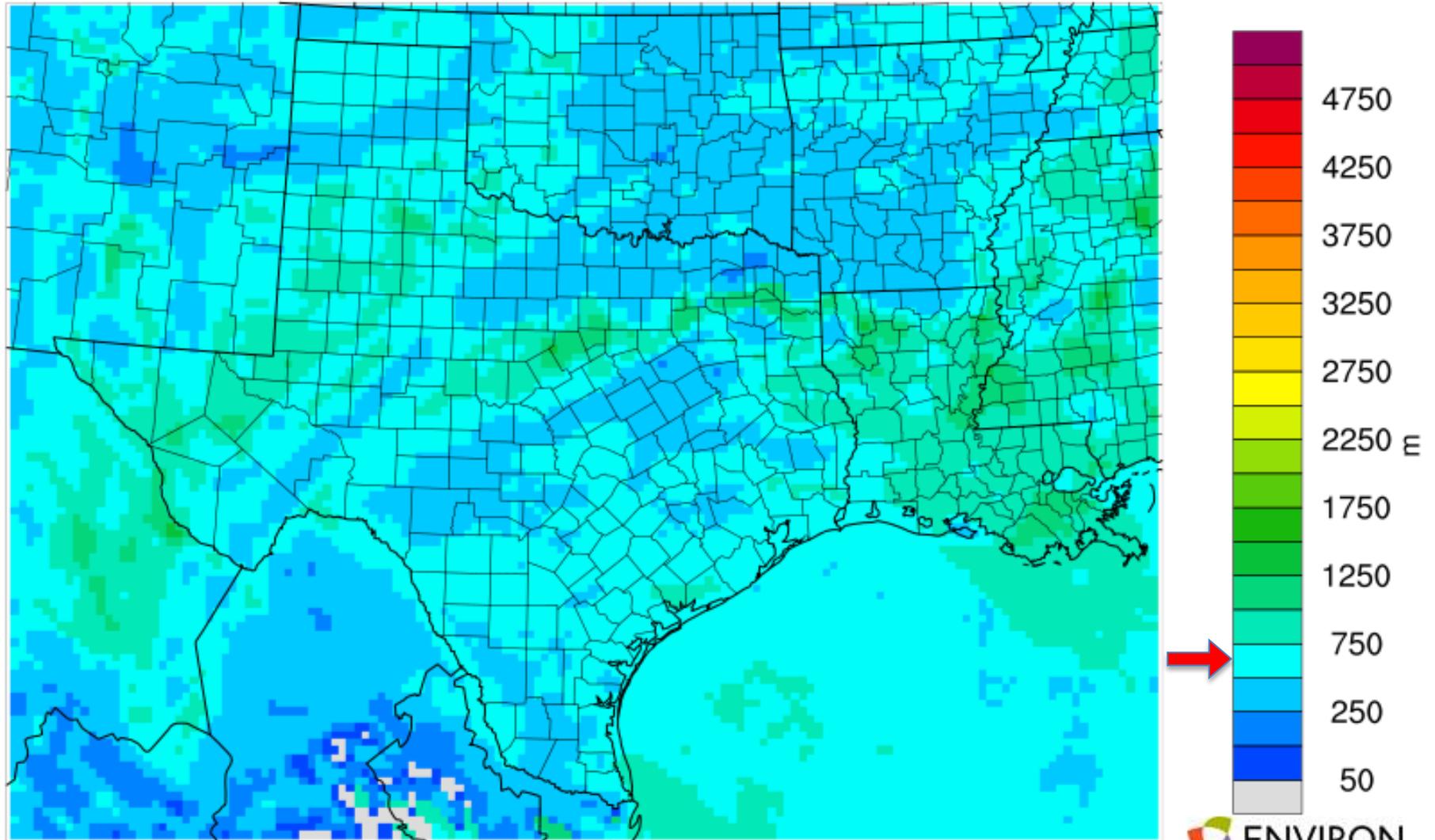


Min(3,97) = 15.8, Max(80,2) = 1205.6

Mon September 16 08:00 CST

PBL Height

Texas 12km



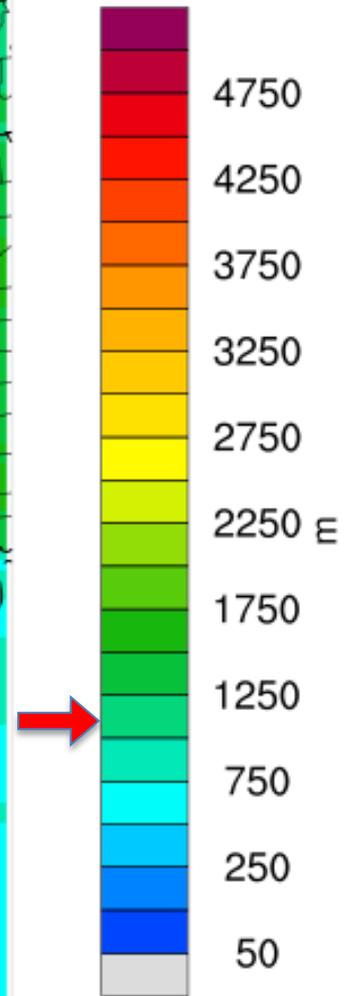
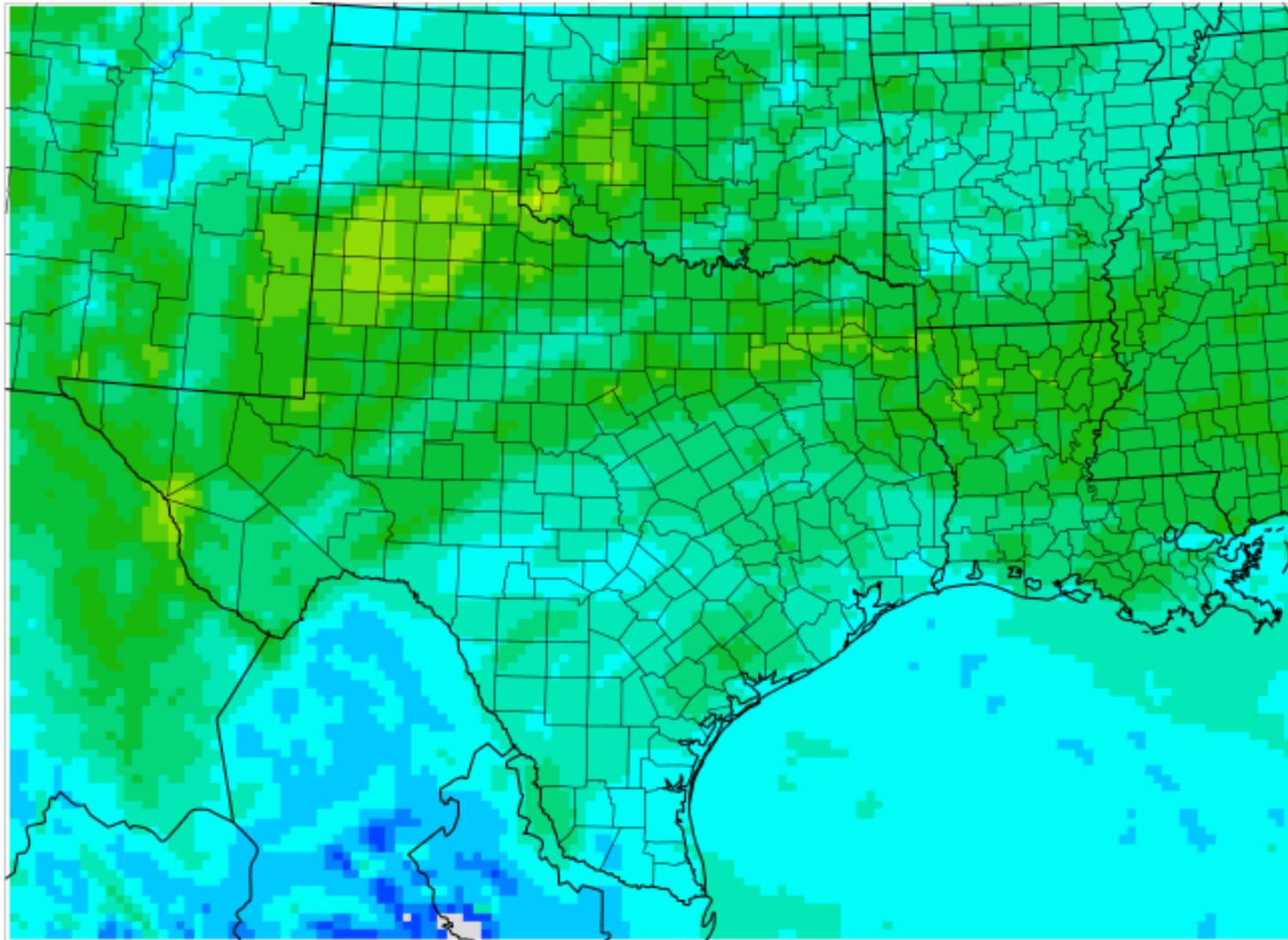
Min(54,2) = 17.7, Max(146,82) = 1363.7

Mon September 16 10:00 CST



PBL Height

Texas 12km



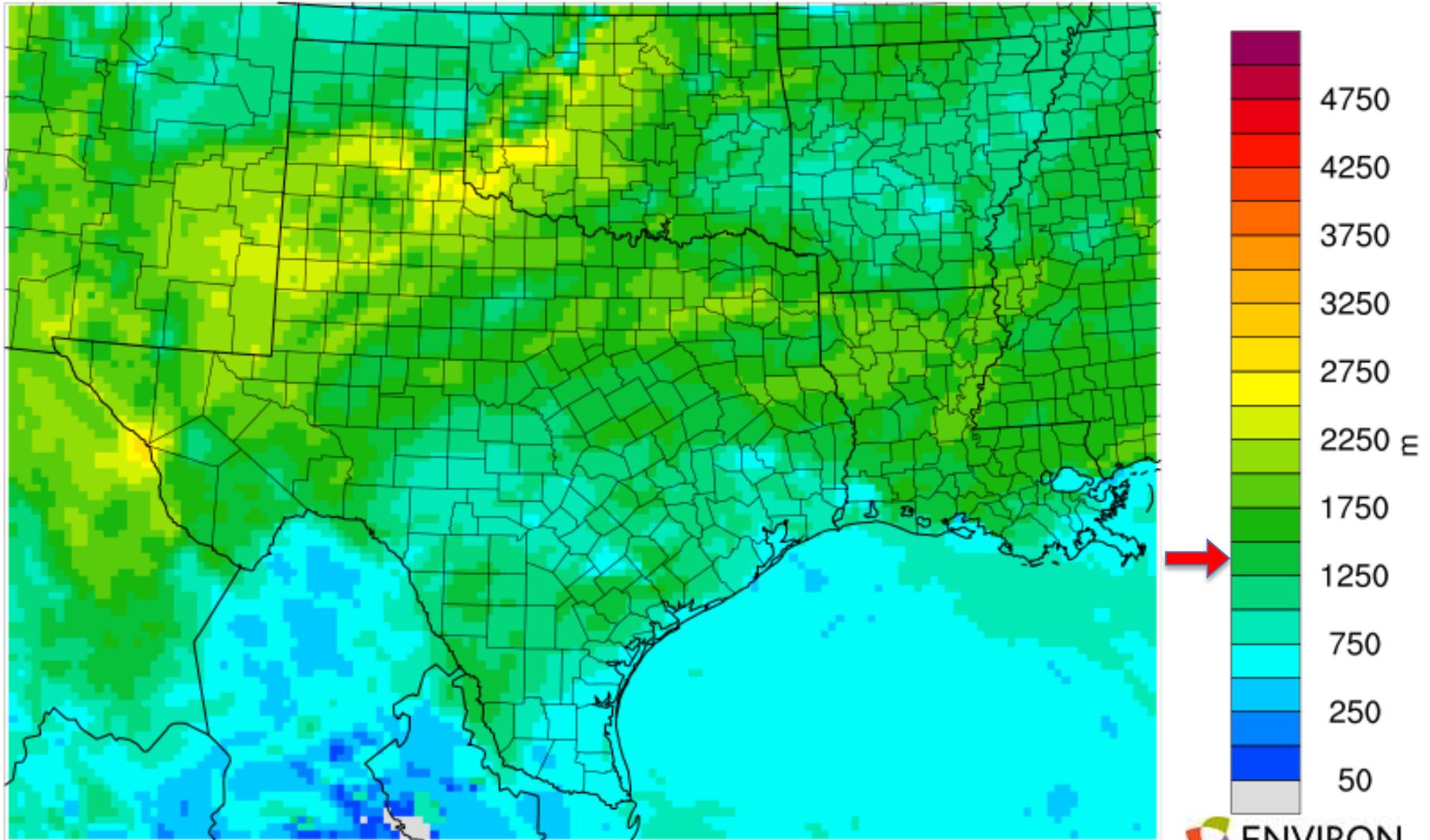
ENVIRON

Min(52,2) = 23.8, Max(62,87) = 2262.8

Mon September 16 12:00 CST

PBL Height

Texas 12km

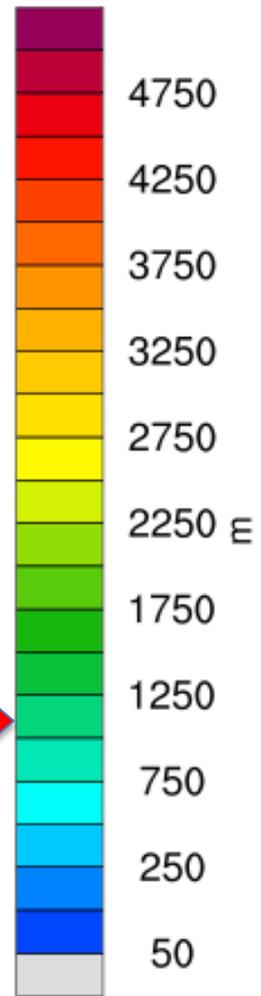
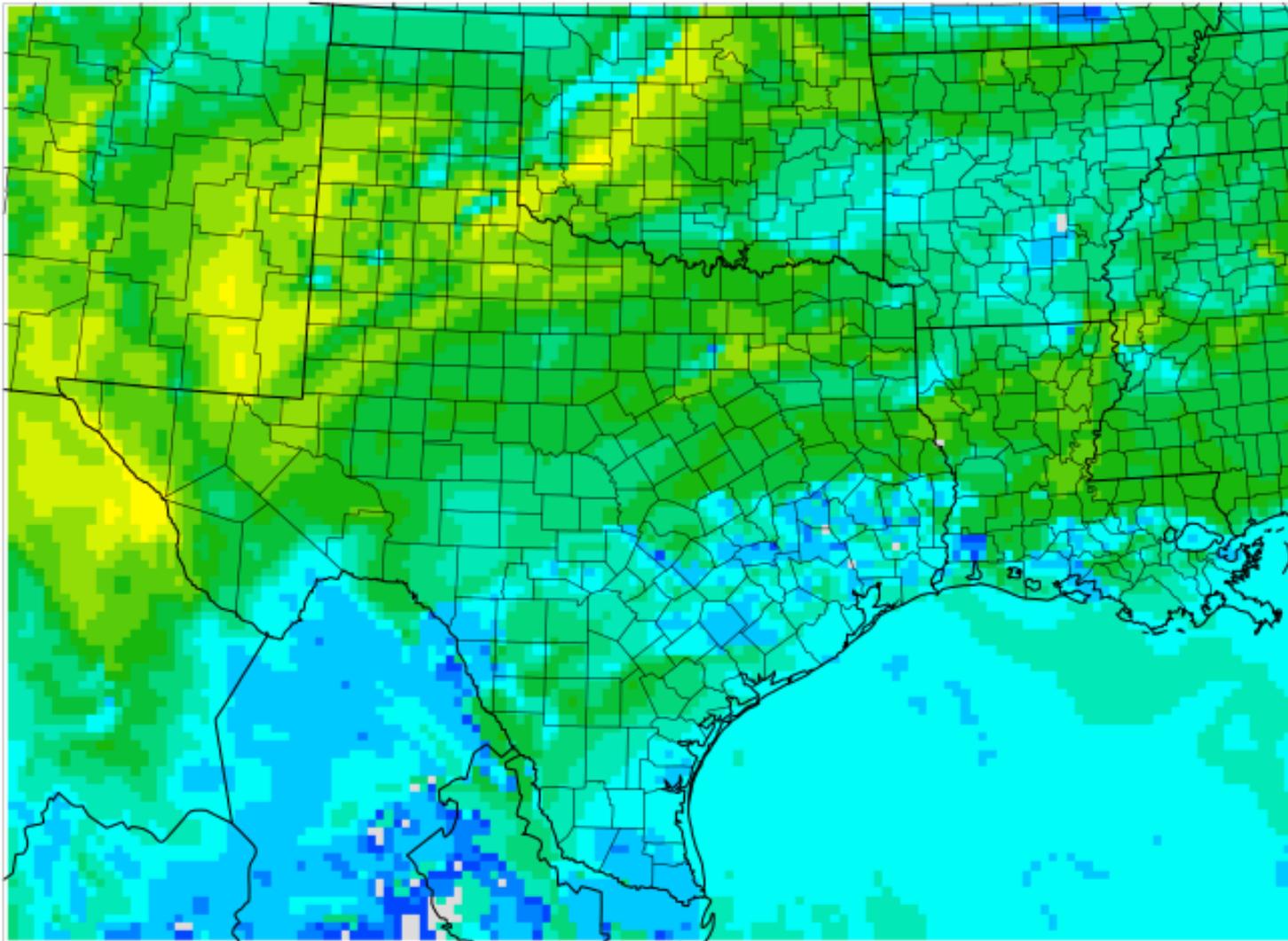


Min(54,2) = 21.0, Max(18,53) = 2860.7

Mon September 16 14:00 CST

PBL Height

Texas 12km



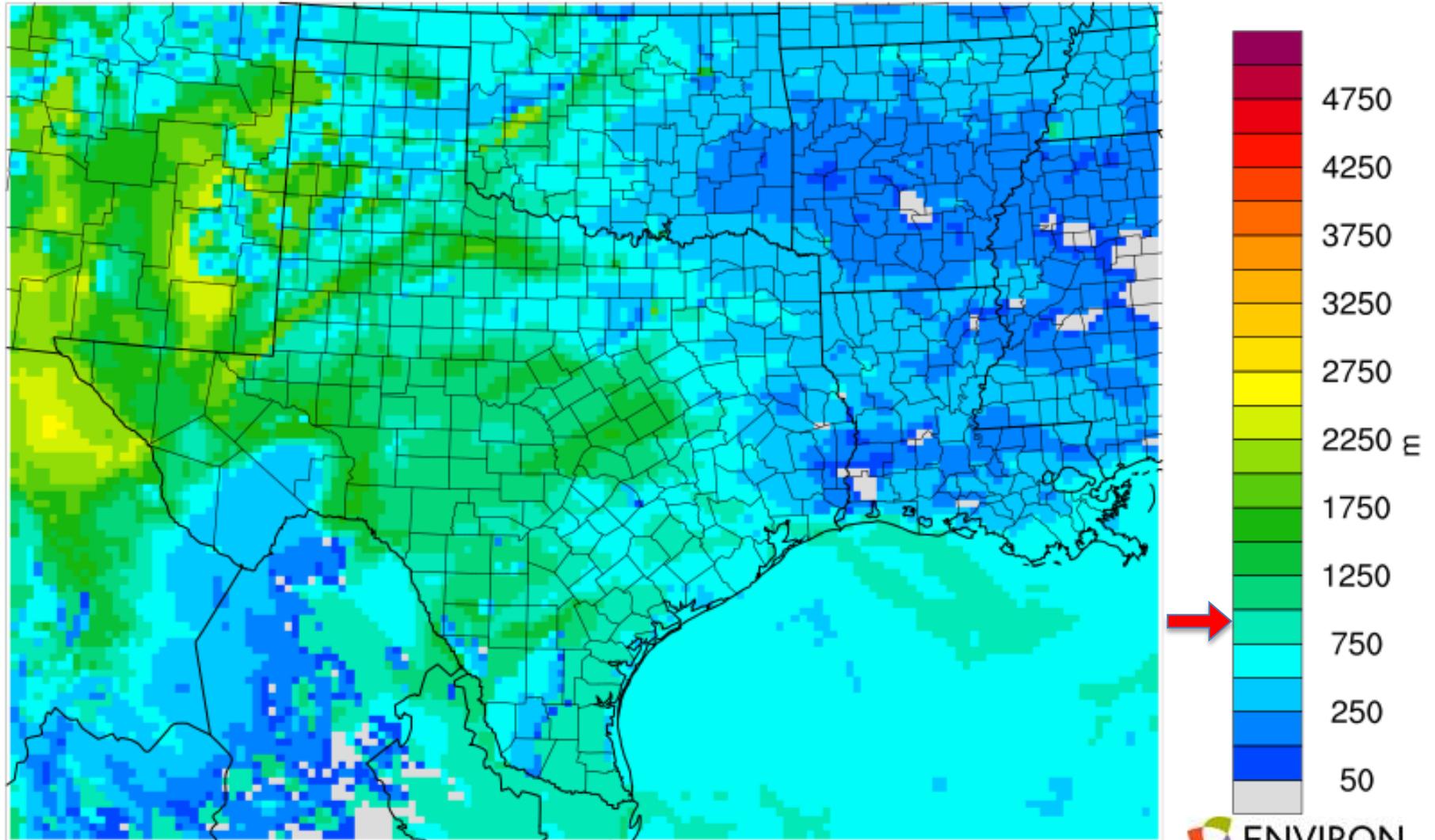
Min(50,20) = 19.2, Max(18,53) = 2685.5

Mon September 16 16:00 CST



PBL Height

Texas 12km



Min(116,83) = 16.9, Max(7,55) = 2593.5

Mon September 16 18:00 CST