

High Ozone Days in 2005

Presentation to the NETAC
Technical and Policy Committees

April 25, 2006

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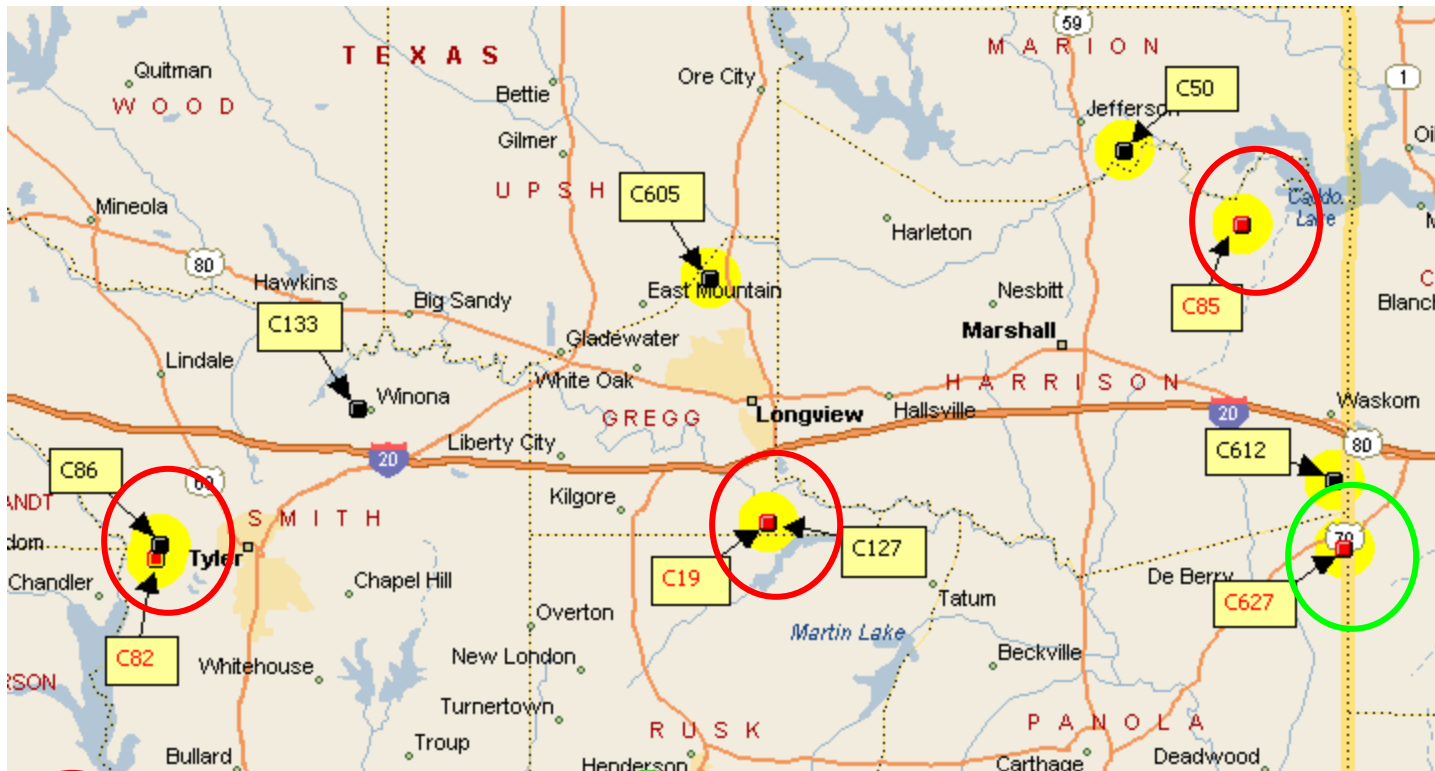
Today's Presentation

- Review of Northeast Texas high ozone days from 2005
- Day-by-day analyses
- 8-hour ozone Design Value trends
- Implications for 8-hour ozone attainment

High ozone days in 2005

Day	Max 8-hour Ozone (ppb)			
	Longview	Karnack	Panola	Tyler
May 22 2005	94	68	64	70
May 27 2005	90	74	79	77
June 15 2005	88	59	76	81
June 22 2005	88	76	73	70
June 28 2005	83	85	72	72
August 31 2005	77	84	92	78
September 1 2005	70	62	60	88
September 10 2005	79	87	77	73

Northeast Texas Ozone Monitors



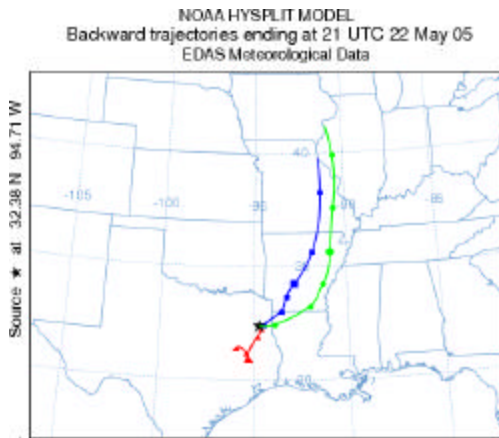
○ TCEQ CAMS

○ NETAC Research Monitor

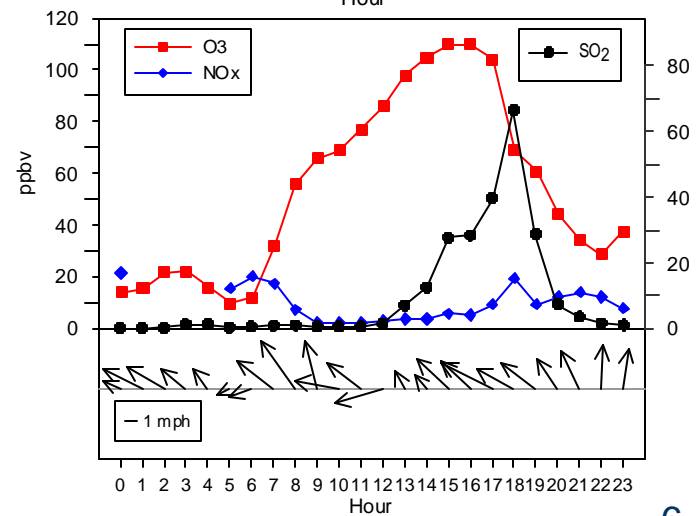
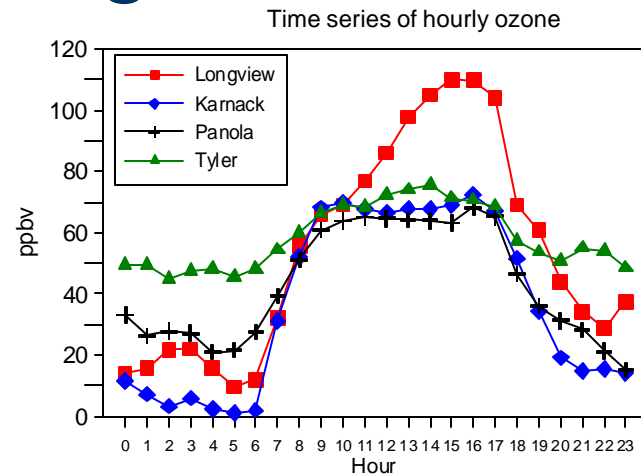
Daily Analyses

- Compare hourly ozone at Northeast Texas monitors
- Review hourly ozone, precursors and local winds at the peak monitor
- Plot 36-hour back-trajectories to indicate regional wind patterns

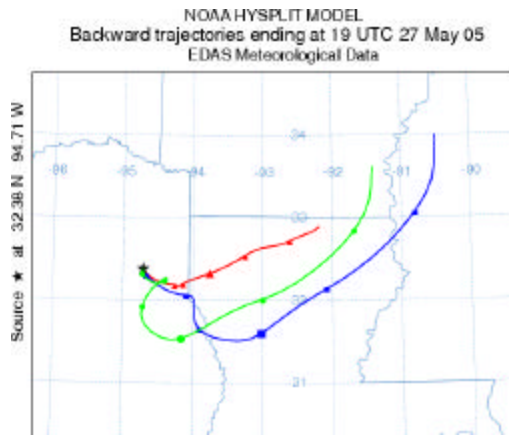
May 22: 94 ppb at Longview



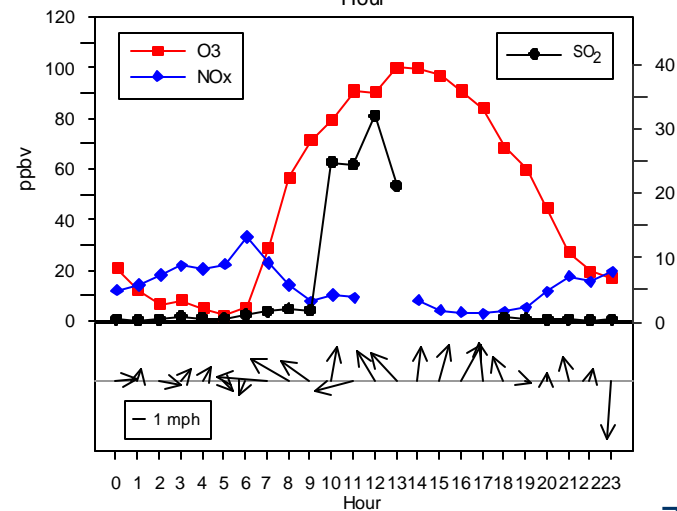
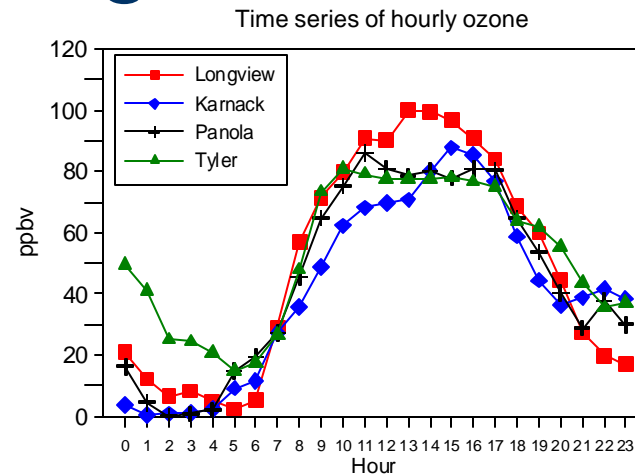
- Longview peak ~40 ppb higher than other sites
- High SO₂ at Longview suggests local power plant plume
- Southeast winds at Longview during plume impact
- Likely Martin Lake plume



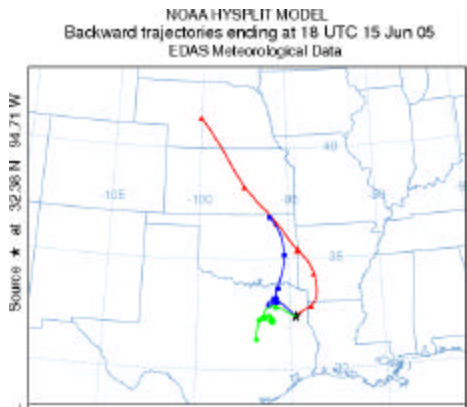
May 27: 90 ppb at Longview



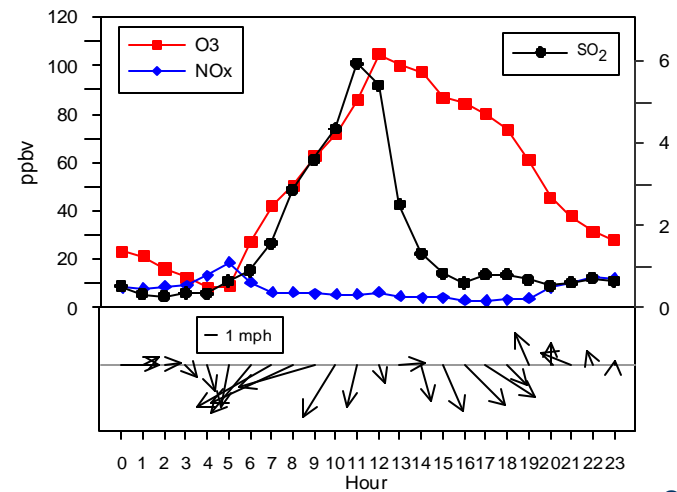
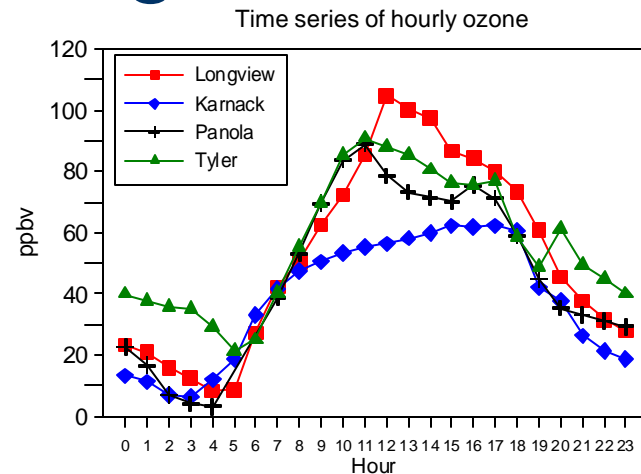
- Longview peak ~15 ppb higher than other sites
- High regional background
- High SO₂ at Longview suggests local power plant plume
- South winds during plume impact
- Likely Martin Lake plume



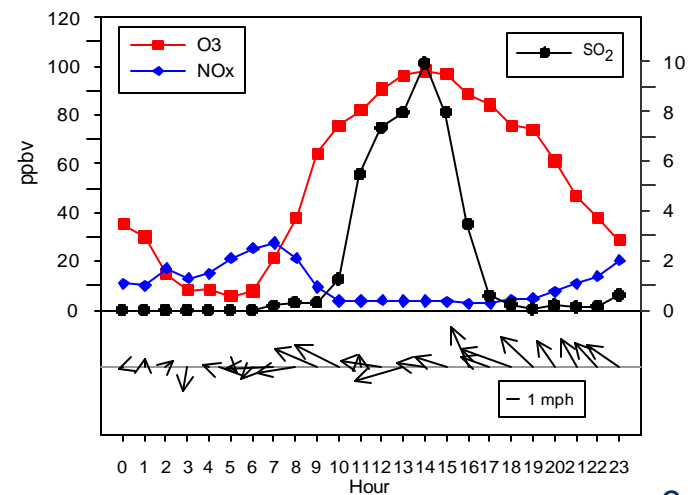
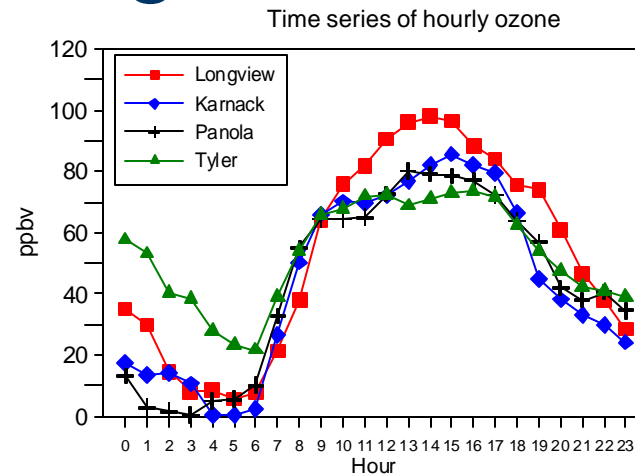
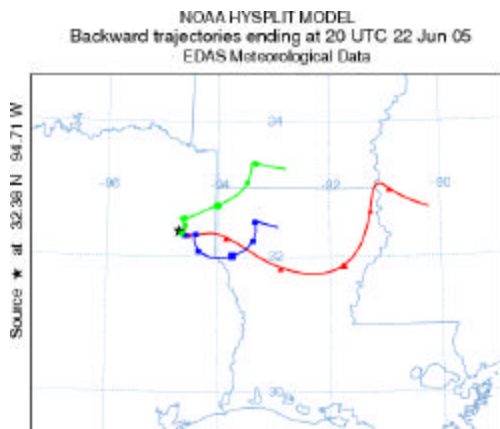
June 15: 88 ppb at Longview



- Longview peak 15 to 40 ppb higher than other sites
- North winds, but variable
- Some SO₂ at Longview, but not very high
- Local or regional event? Needs more analysis

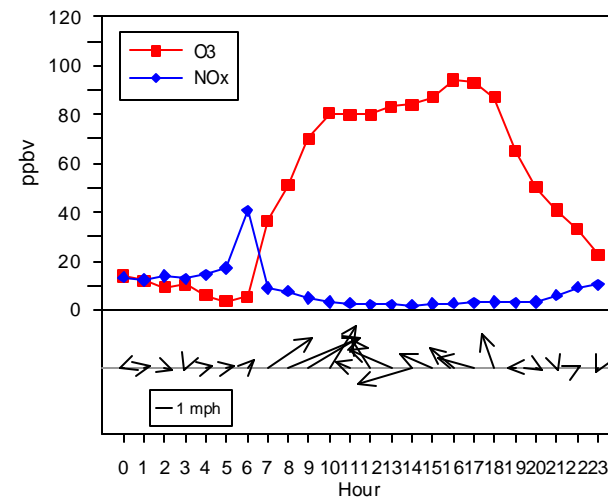
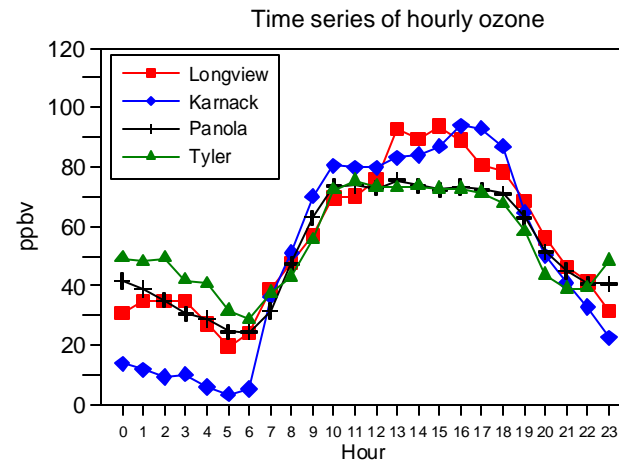
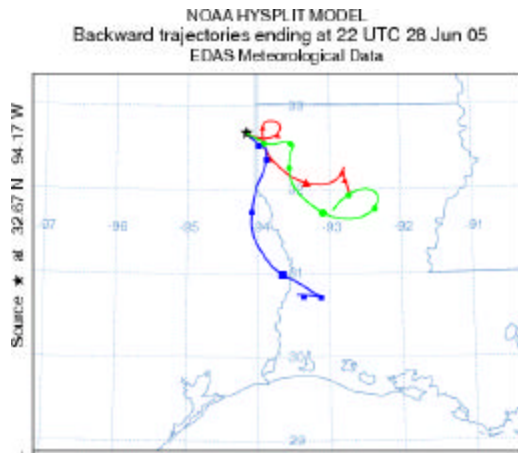


June 22: 88 ppb at Longview



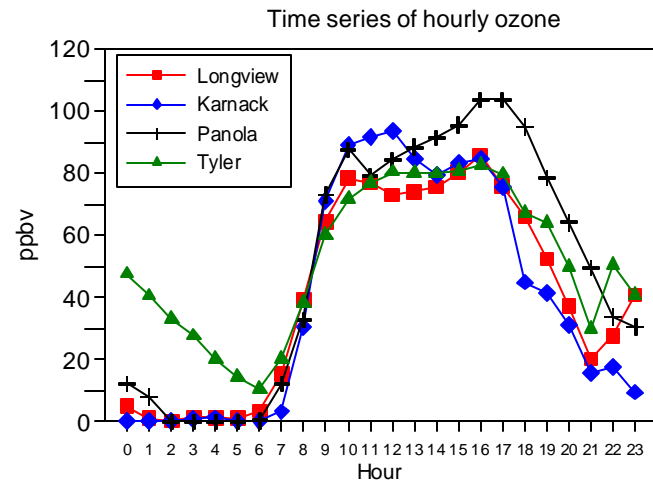
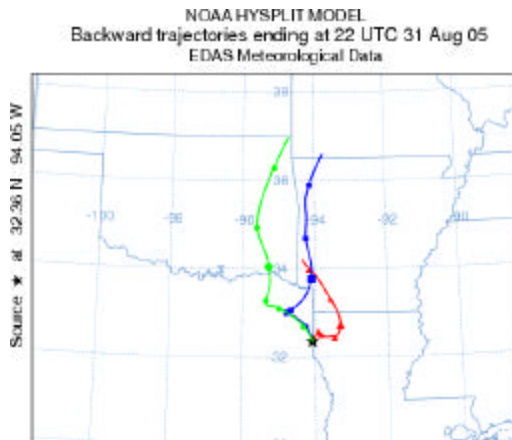
- Longview peak ~20 ppb higher than other sites
- East winds
- Some SO2 at Longview, but not very high
- Pirkey plume or regional event? Needs more analysis

June 28: 85 ppb at Karnack

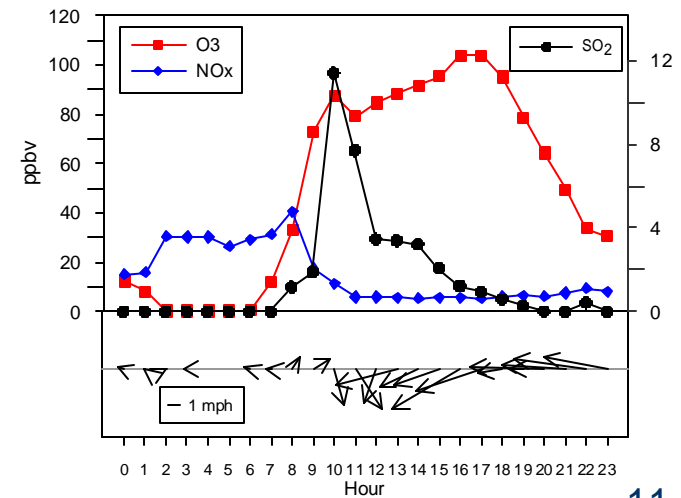


- Karnack (and Longview) ~15 ppb higher than other sites
- Wind reversal and trajectories indicate stagnation
- Karnack peak late in day likely the Shreveport plume

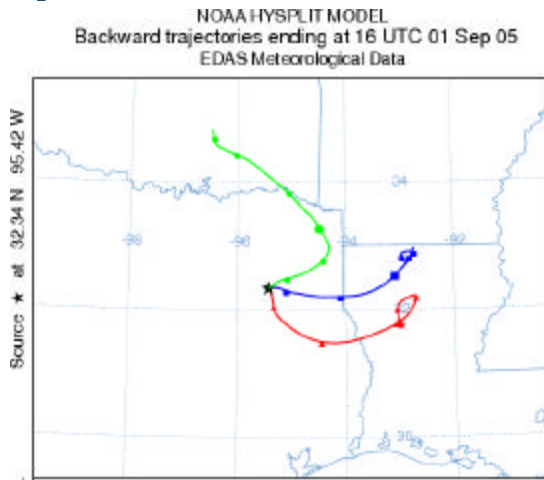
August 31: 92 ppb at Panola



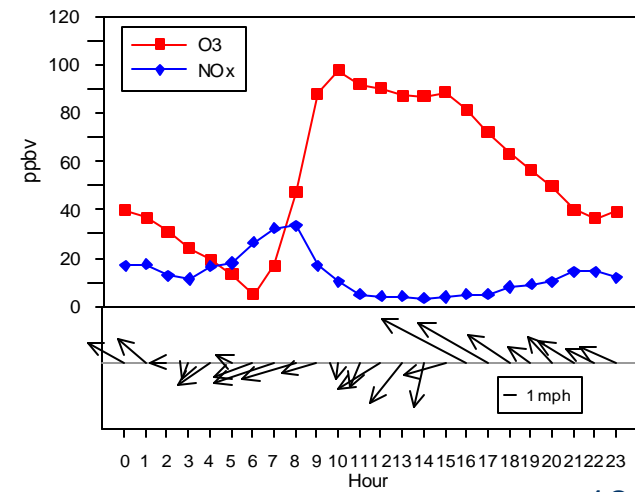
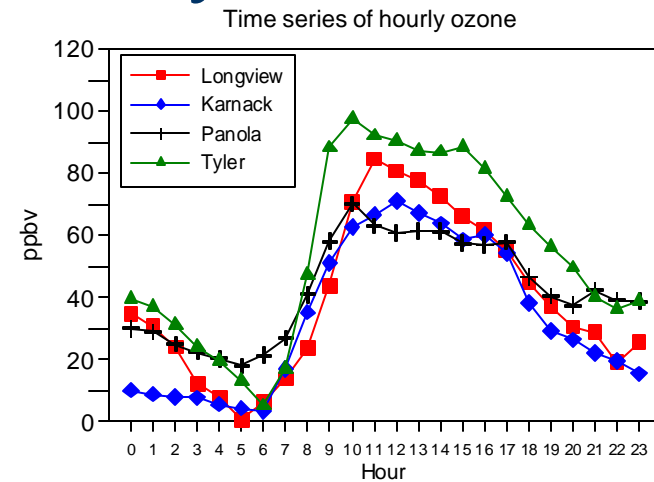
- Panola peaked 10 to 20 ppb higher than other sites
- Wind reversal during the day
- Panola morning O₃/SO₂ “blip” may be NE Texas or regional
- Panola evening peak is likely the Shreveport plume



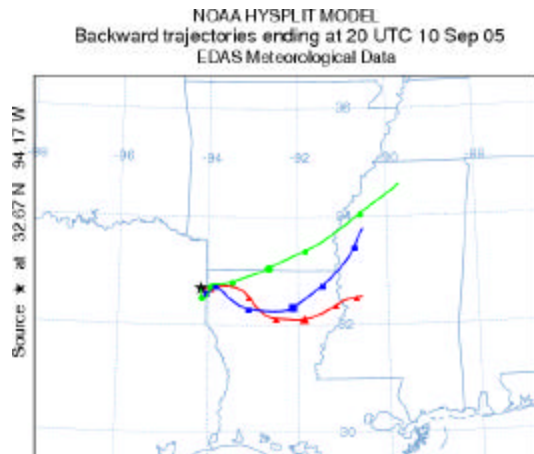
September 1: 88 ppb at Tyler



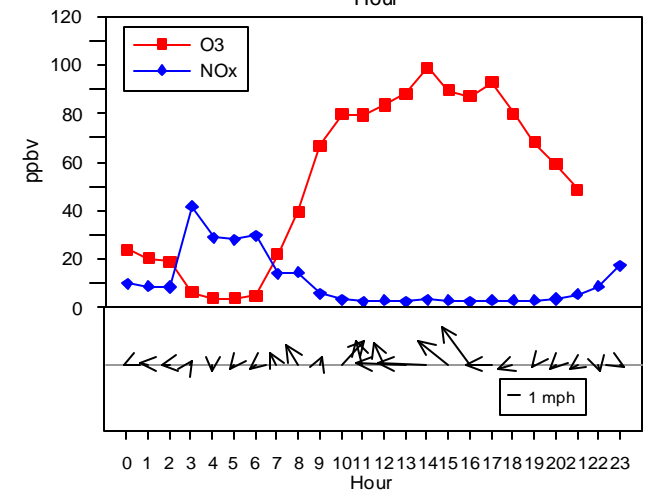
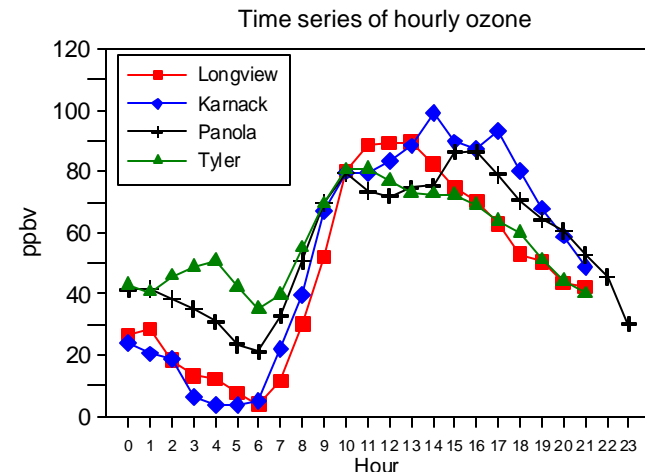
- Tyler peaked 10 to 30 ppb higher than other sites
- East winds, rain showers
- Combination of NE Texas sources and transport from East



September 10: 87 ppb at Karnack



- Peak ozone similar at all sites
- East winds
- Mainly a regional transport event
- Late peak at Karnack likely the Shreveport plume



8-hour Ozone Design Values

Years	Longview	Tyler	Karnack	Panola
2001 - 2003	82	81	84	NA
2002 - 2004	83	81	81	NA
2003 - 2005	84	81	80	NA

- Panola does not have 3 years of data
- Starting this year, Panola will operate as a research site

Design Value Trends Through 2005

- Decreasing at Karnack
- Steady at Tyler
 - 81 ppb
- Increasing at Longview
 - Longview is now only just attaining the 8-hour standard at 84 ppb
 - 85 ppb would be nonattainment

Recent 4th High 8-Hour Ozone Values at Longview

Year	Longview 4 th High 8-Hr Ozone (ppb)
2001	82
2002	84
2003	82
2004	83
2005	88

Implications for ozone attainment

- Longview needs 4th high 8-hour ozone values of 83 ppb or lower in 2006 and 2007 to remain in attainment