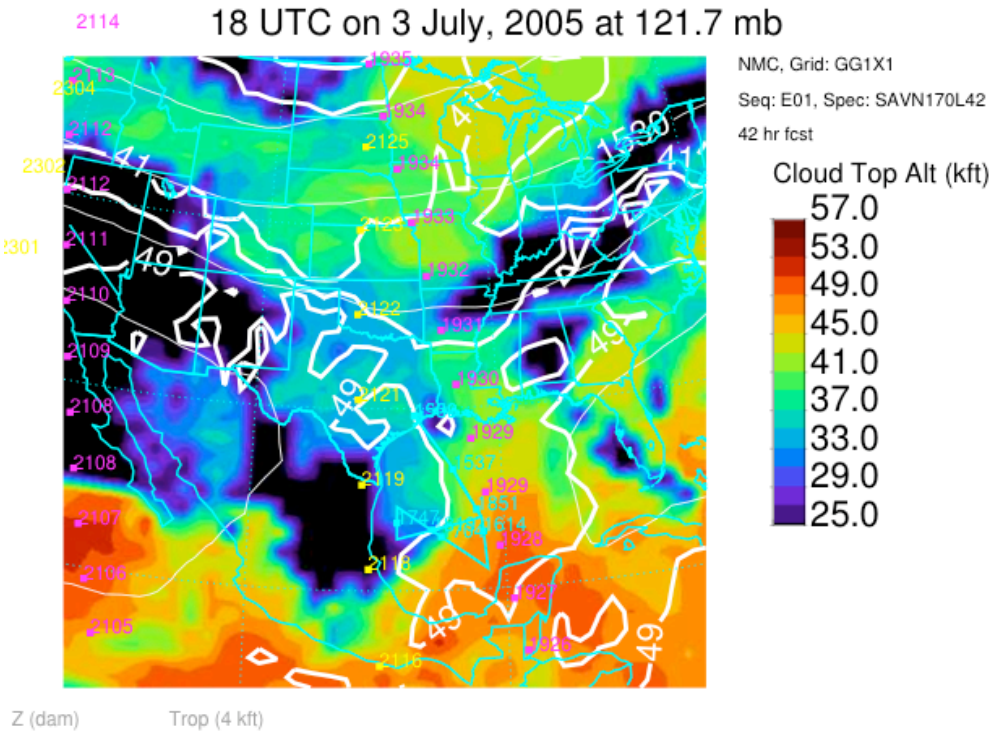
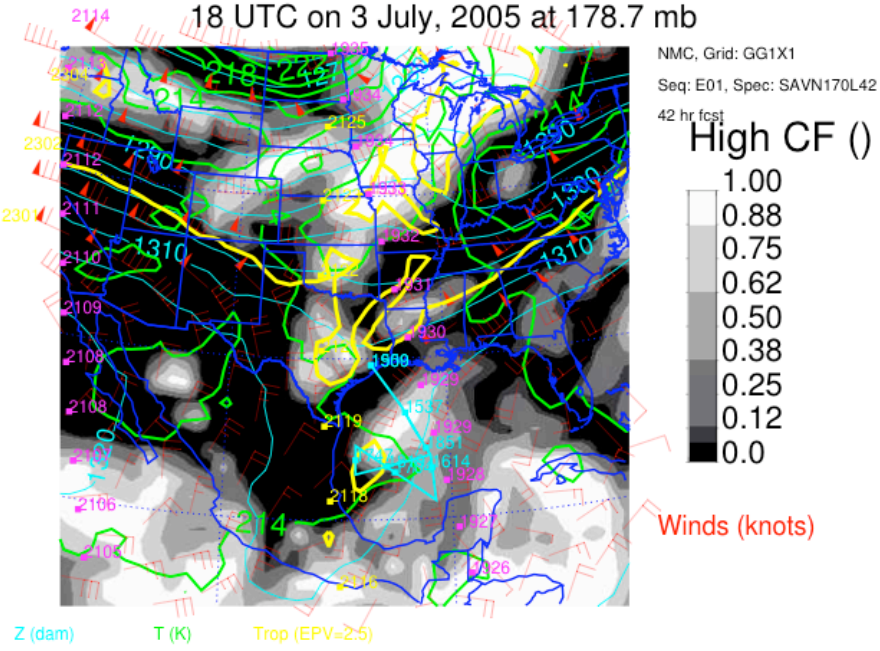
Weather Briefing, July 2, 2005

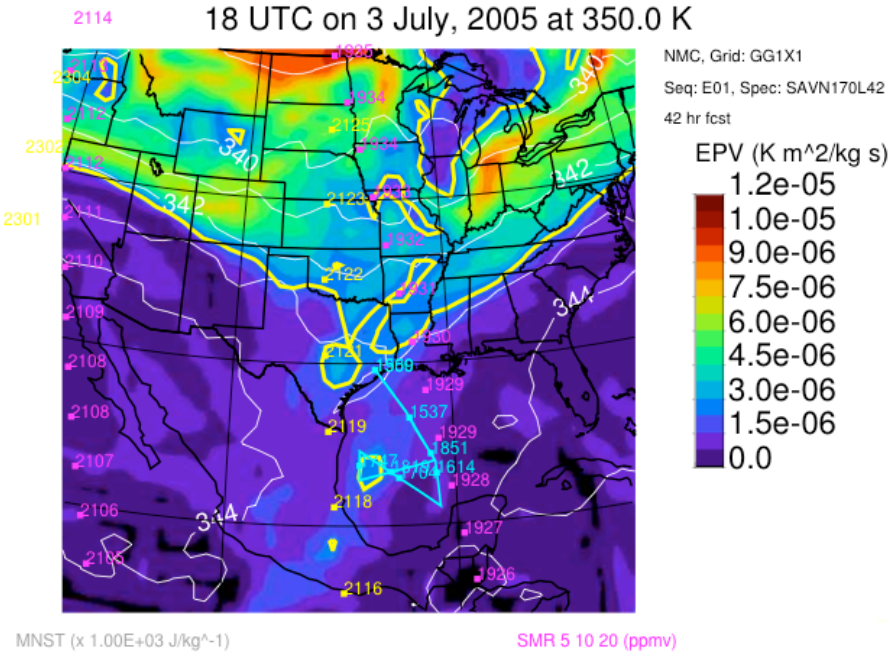
As of 12 UT A mesoscale convective system is sitting over west central Oklahoma (with a portion over the Dallas area) moving eastward at about 30 knots or so. It is dissipating right now, so is unlikely to affect us directly. However, air over us is quite unstable (CAPE values over 2000 from yesterday's Lake Charles sounding), so dynamic pulses from this system should be able to set off convection in our area, increasing rain chances from what we have had in the past few days (between 30 and 40% chance, higher as you go northward). The ridge builds just to the west of us again for Sunday, with a sharp upper level trough nearly on top of us. Most of the rain should thus be to the east of us, reducing our chances of showers and thundershowers to about 20%. The fact is, though, that one of the models has a mesoscale system moving across not to far to the north of us. These have the ability to stimulate convection in the warm unstable air sitting over us, as happened late yesterday to the east of us. For Tuesday, we are looking at weather coming at us from the south and east. Whether it materializes remains to be seen, given the difficulty of tropical forecasting.

Science:

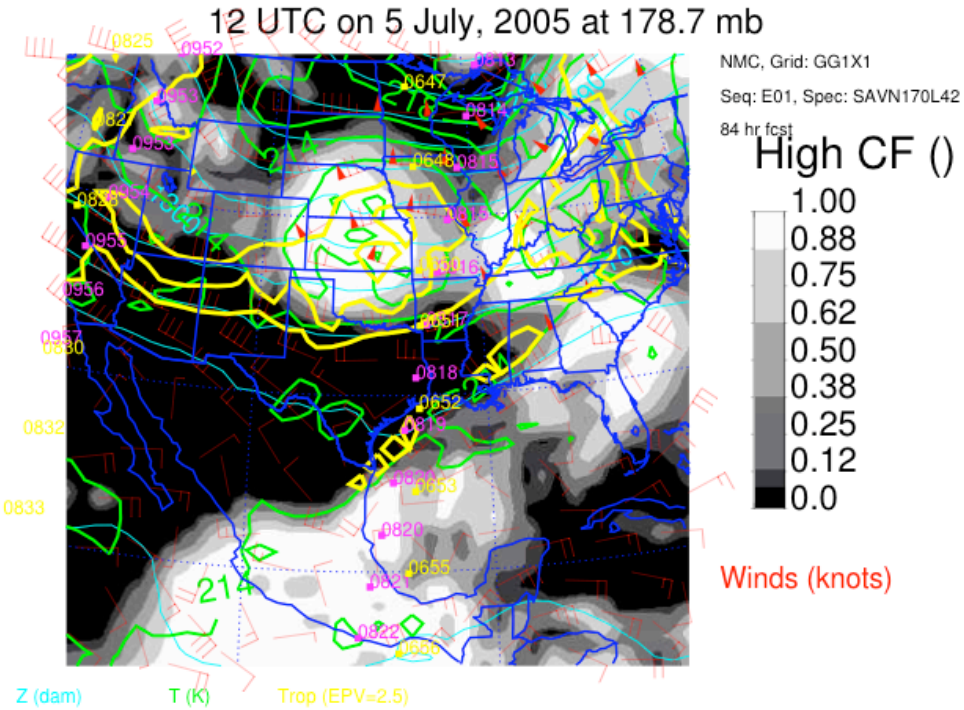
The pattern of high clouds, or at least high moisture at upper levels (41 kft and above) for tomorrow is fairly stable from forecast run to forecast run. This is related to the trough mentioned in the above paragraph, whose development is stimulating the north-norhteastward flow of air from the eastern Gulf of Campeche/Yucatan. If anything, the high cloud frequencies have increased somewhat. The AVN puts an MCS to the west of us tomorrow, a feature not reproduced in the eta model. The reality of this is thus doubtful. A note about this trough. It looks like this could be an interesting strat-trop exchange event, specifically of stratospheric air moving equatorward at 350K. This event will reinforce previous blobs of stratospheric air forced equatorward in association with the tropical storm that moved over Mexico a few days ago. That system, by the way, is still generating deep convection over western Mexico.

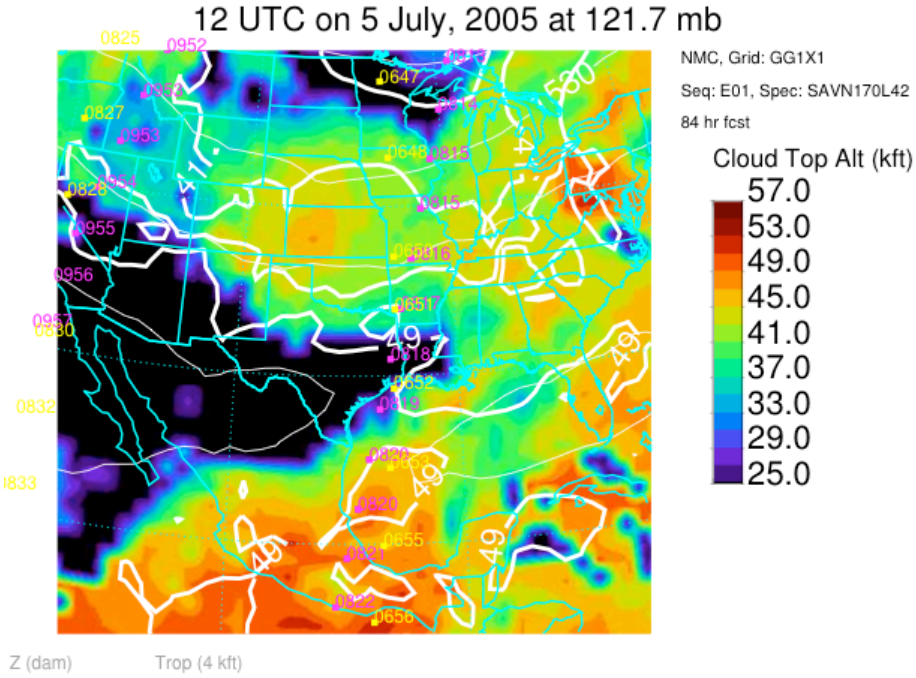

18 UTC on 3 July, 2005 at 121.7 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
42 hr fcst
Cloud Top Alt (kft)
57.0
53.0
49.0
45.0
41.0
37.0
33.0
29.0
25.0
Z (dam)
Trop (4 kft)


18 UTC on 3 July, 2005 at 178.7 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
42 hr fcst
High CF ()
1.00
0.88
0.75
0.62
0.50
0.38
0.25
0.12
0.0
Winds (knots)
Z (dam)
T (K)
Trop (EPV=2.5)



For Tuesday, there is a sharp system forecast to propagate across Kansas. Conditions are favorable for MCS development (good moisture coming up from the south). Winds at upper levels are strong, so the hope is to get at some outflow ahead of the system. It is a bit early to plan these details, given that the AVN is a bit marginal for forecasting MCS systems anyway. No eta forecasts for Tuesday are available yet.




12 UTC on 5 July, 2005 at 121.7 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
84 hr fcst
Cloud Top Alt (kft)
57.0
53.0
49.0
45.0
41.0
37.0
33.0
29.0
25.0
Z (dam)
Trop (4 kft)