Weather Briefing for June 9, 2005

Local:

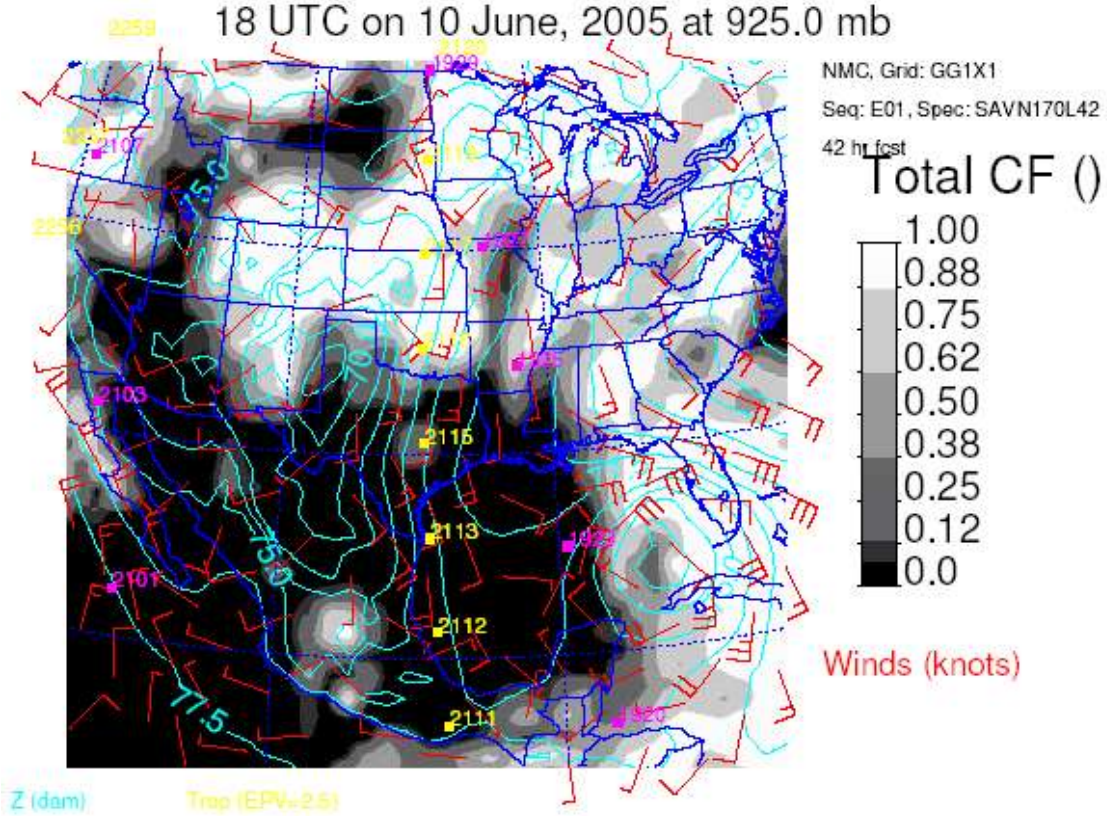
At midlevels (500mb), a large scale trough is over the US West coast, with a ridge centered on the east coast.. This pattern is not expected to change very much until Sunday, when the trough pattern weakens, leading to a more zonal pattern. More importantly, the entire jet at this level (which often drives the frontal systems we are used to in the winter) is well north of us. That leaves us out of the midlatitude storm track (which is weaker anyway in the summer) and in a more tropical weather regime (rather obvious when you go outside). Local conditions are similar to yesterday, in that the chance of afternoon thundershowers are about the same – lots of instability but enough of a capping inversion to keep the activity limited in our area. The official forecast is for 20% chance of rain this afternoon, and I see no reason to deviate from that.

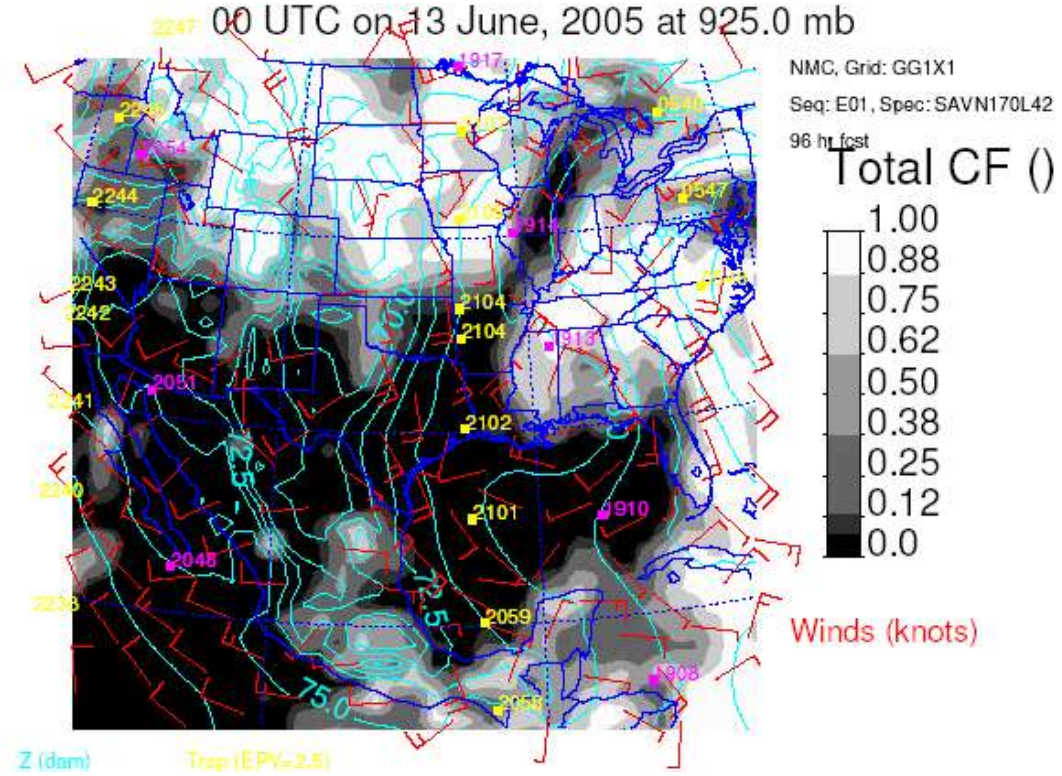
The first tropical depression of the season has formed in the Cuba/Yucatan region. It is expected to move basically north, making landfall in the Mississippi region at 6Z Sunday (though it is quite early to be overly confident in the exact location). There is enough shear left in the upper and midlevel jets to prevent too much strengthening (50 knots max in two days). Its significance for us (at this point) is added subsidence, meaning very reduced rain chances through the forecast period (Monday). Winds should be the usual south-southeast at speeds less than 15 knots. Another point is that the NAM (or eta) is NOT capturing this system well (I pointed out the disagreement with the AVN in yesterday's monologue). Thus, flight planners might want to stick with the AVN or GEOS models for the next few days.

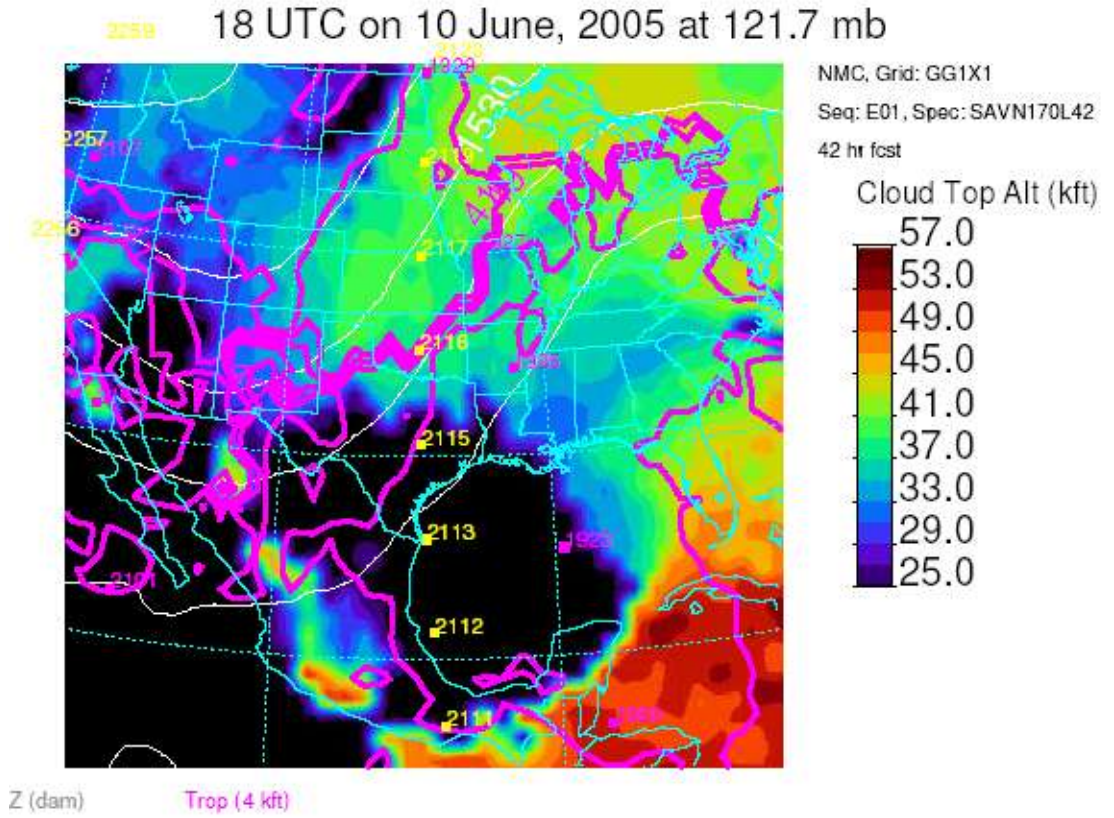
Science:

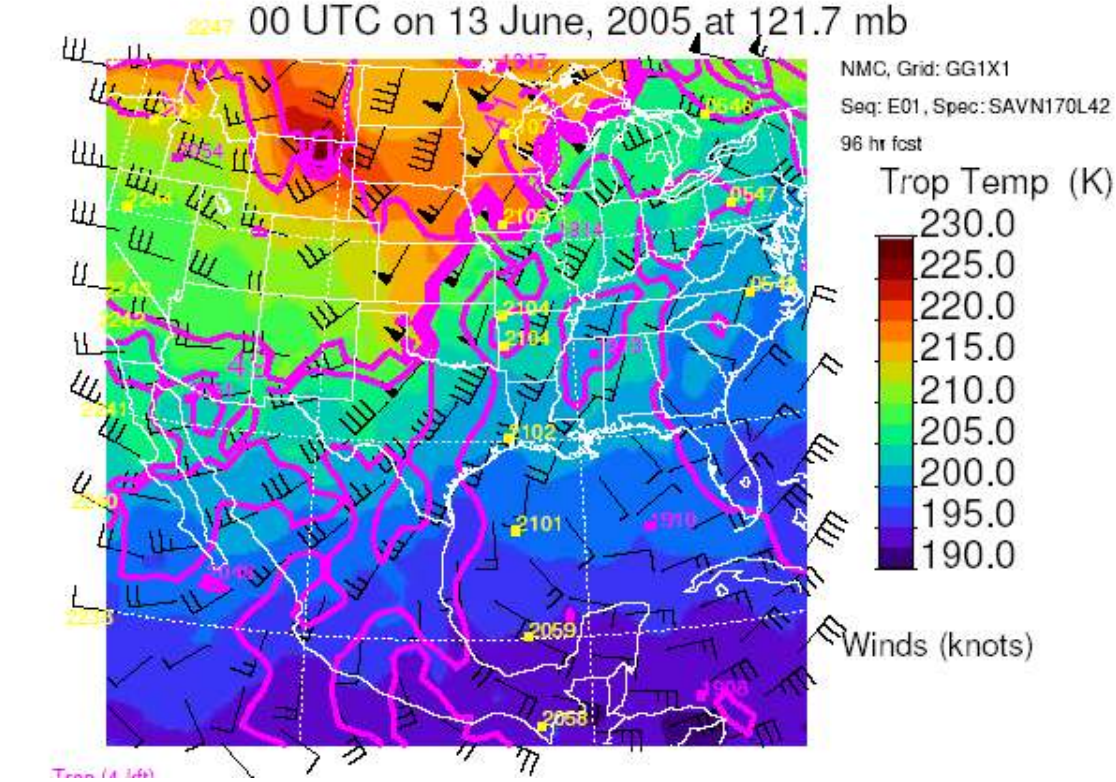
The implications of the above-described scenario are that we expect large scale subsidence in our area (west of central Lousiana), suppressed cloudiness, and fairly steady south-southeast winds in the next few days (through Monday) at the surface (though the winds will be weaker than today). At upper levels, the tropopause break will be over the Oklahoma panhandle, sloping southwest-northeast. North of this tropopause break there will be significant thick cloud – there is a masive system over eastern Kansas right now (6:30 AM), fed by all the moisture from the Gulf and triggered by activity along the jet stream. It should be noted that the thick cloud will be due to convective activity, and may thus be spotty and hard to predict. Satellite tracks are favorable for HIRDLS/MLS tomorrow (day) or Saturday night.

I have attached cloudiness maps for tomorrow and Sunday, and cloud top altitude/tropopause maps for those same periods.


18 UTC on 10 June, 2005 at 925.0 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
42 hr fcst
Total CF ()
1.00
0.88
0.75
0.62
0.50
0.38
0.25
0.12
0.0
Winds (knots)
Z (dam)
Trop (EPV=2.5)


00 UTC on 13 June, 2005 at 925.0 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
96 hr fcst
Total CF ()
1.00
0.88
0.75
0.62
0.50
0.38
0.25
0.12
0.0
Winds (knots)
Z (dam)
Trop (EPV=2.5)


18 UTC on 10 June, 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
2115
2113
2112
Z (dam)
Trop (4 kft)


00 UTC on 13 June, 2005 at 121.7 mb
NMC, Grid: GG1X1
Seq: E01, Spec: SAVN170L42
96 hr fcst
Trop Temp (K)
230.0
225.0
220.0
215.0
210.0
205.0
200.0
195.0
190.0
2101
2059
2058
Winds (knots)