Met briefing, AM 041110

Weather and cloud outlook for Wednesday through Friday

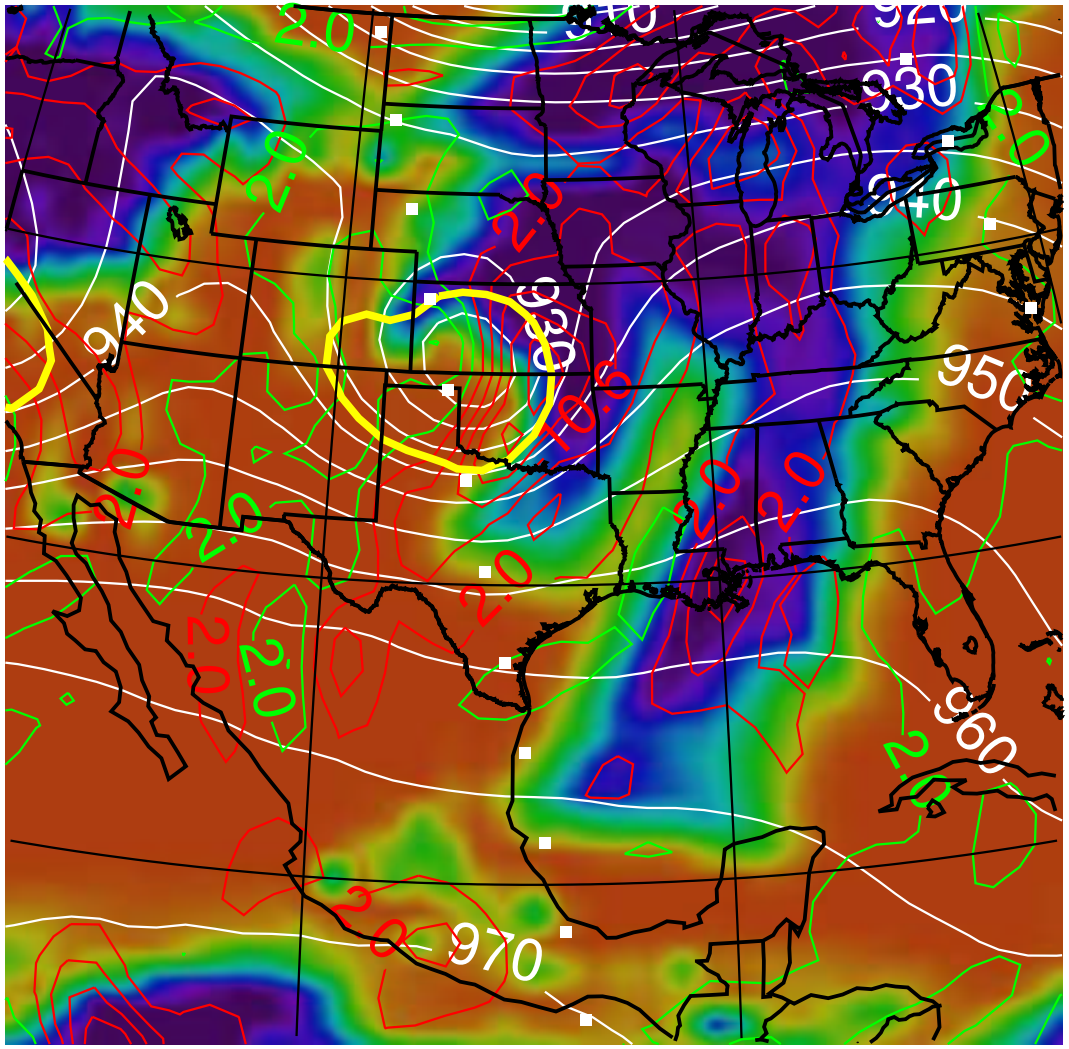
The forecast for today looks very much like what was anticipated yesterday, except that rain chances have been lowered somewhat to 20%. As far as flying conditions are concerned, it looks fine. The only comment about the cloud forecast I will make is that the current run is very similar to what was available late yesterday. The upper level wave that is moving across the Kansas/Texas panhandle region is, if anything, moving ever so slightly faster than previous forecasts. With the Aura track behind the trailing front, this means that we may get more clear skies if we fly north. A more interesting development is the strengthening of the upper level (and only upper level) cloud system that forms a trailing arc from central Tennessee through the west central Gulf of Mexico (first plot). There is greater vertical velocity associated with this thing than before. It is also further offshore. It does look a bit thin on the satellite picture, but at least it will maintain itself. (Check satellite imagery at http://bocachica.arc.nasa.gov/AVE/Forecasting.html)

The advertised cold frontal passage should occur in the early afternoon tomorrow, with 30% chance of rain ahead of it (for tomorrow). Though there is moisture and synoptic scale uplift, the atmosphere does not appear unstable enough for thunderstorms. However, they are still a possibility. My call is that if you need to do something to the airplane that requires being outside, you can probably count on being able to do it.

Temperatures will drop after the cold front passage, with lingering clouds keeping things from warming up beyond the lower 60s on Friday. Winds will shift to the north and be about what we forecast yesterday (maybe less) -- 10 to 15 miles per hour.

Friday's cloud forecast is shown in the last four plots. Most of the cloud indicated in the total cloud in the northern part of the Aura track is high cloud. There is middle cloud there as well (northern part of Aura track). Low cloud dominates the picture over us and further south. The latest run has advanced the movement of the upper level wave over northern Arizona that is generating the high cloud over the ARM SGP site. The wave is also further north. Higher vertical velocities than earlier are seen associated with the cloudy region than in previous runs. Still, most of that vertical velocity is upstream. One point of interest here (getting away from the ivory tower of models to the boots on the ground) is that the Norman office of NWS is calling for mostly sunny skies over Ponca City, OK (near the ARM site). The interpretation here is that much of the high cloud may be quite thin. It is, after all, downstream of the major weather generating action. As I said in a private message, you should investigate what the measurements mean when the cloud you expect is thin cirrus through which you can see the sun.

18 UTC on 10 November, 2004 at 300.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

18 hr fcst

High CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

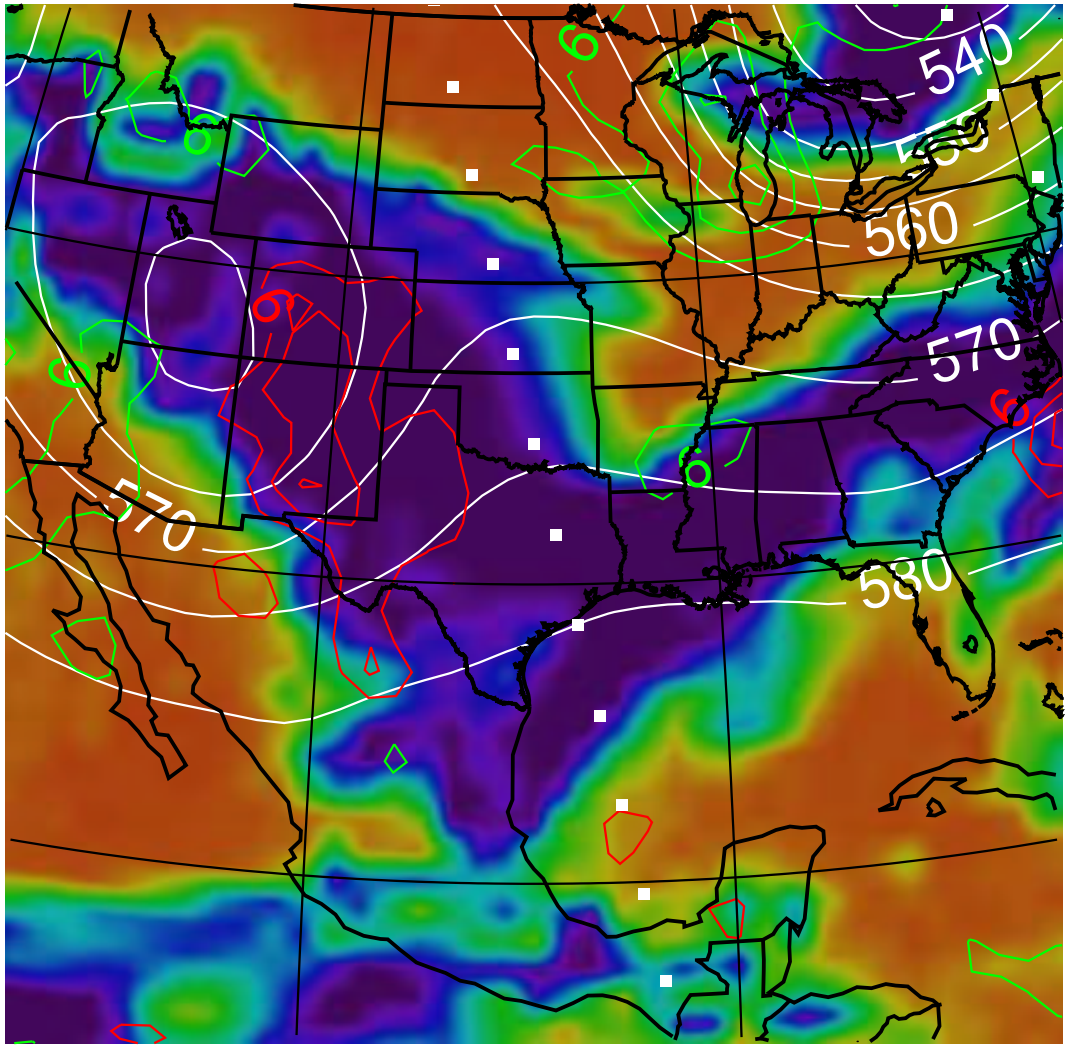
Z (dam)

Ascent (4 mb/hr)

Descent (4 mb/hr)

Trop (EPV=2.5)

00 UTC on 13 November, 2004 at 500.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

72 hr fcst

Total CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

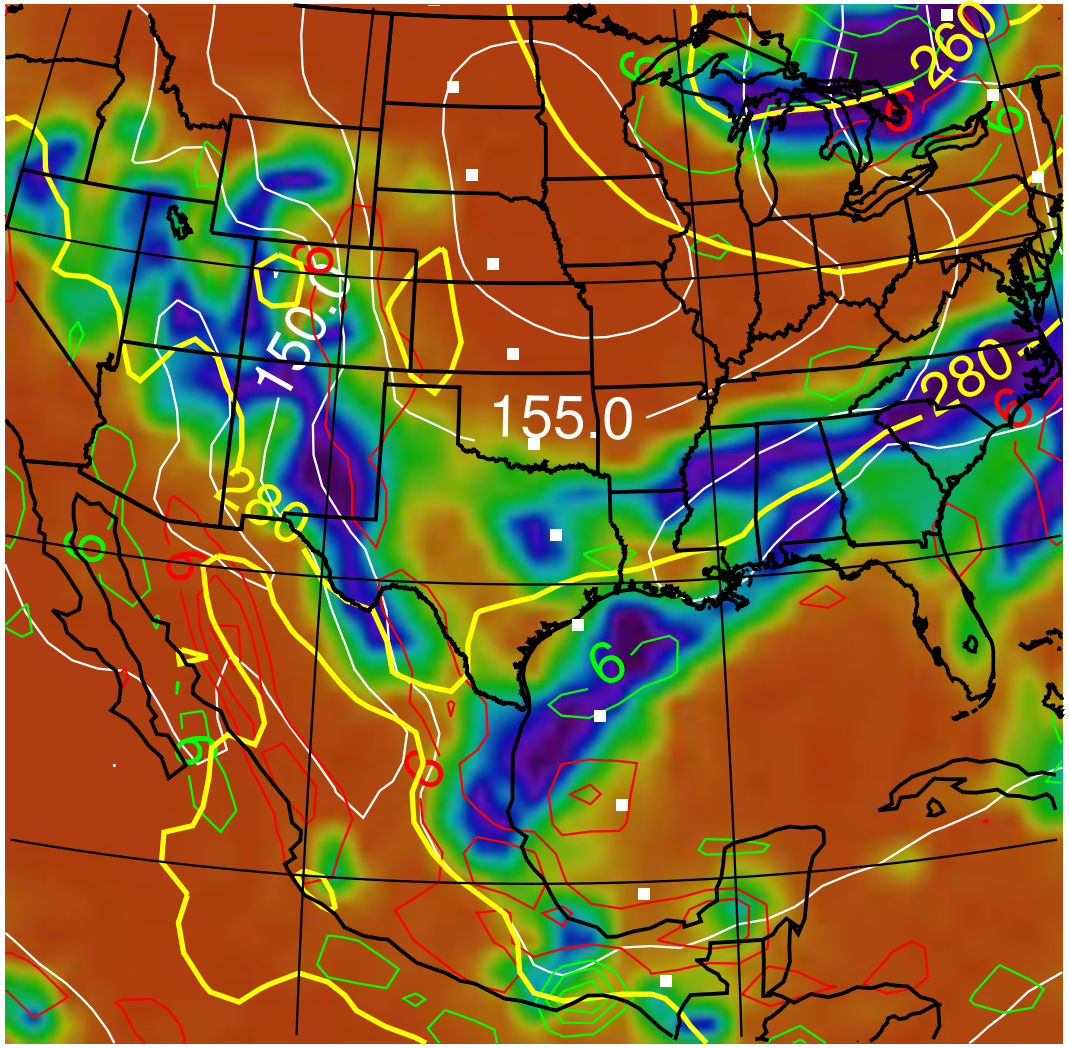
Z (dam)

Ascent (6 mb/hr)

Descent (6 mb/hr)

Trop (EPV=2.5)

00 UTC on 13 November, 2004 at 850.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

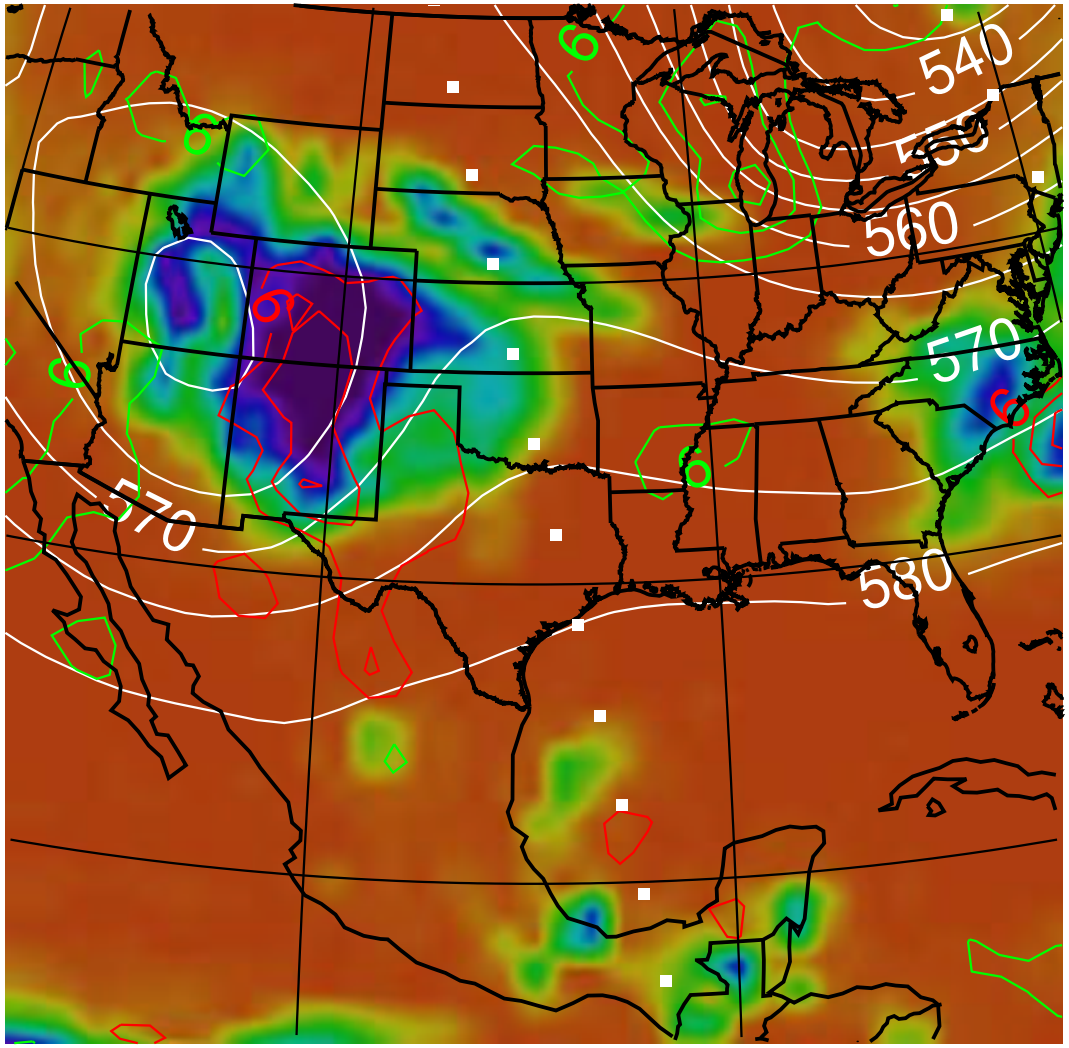
72 hr fcst

Low CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

Z (dam) Ascent (6 mb/hr) Descent (6 mb/hr) T (K)

00 UTC on 13 November, 2004 at 500.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

72 hr fcst

Middle CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

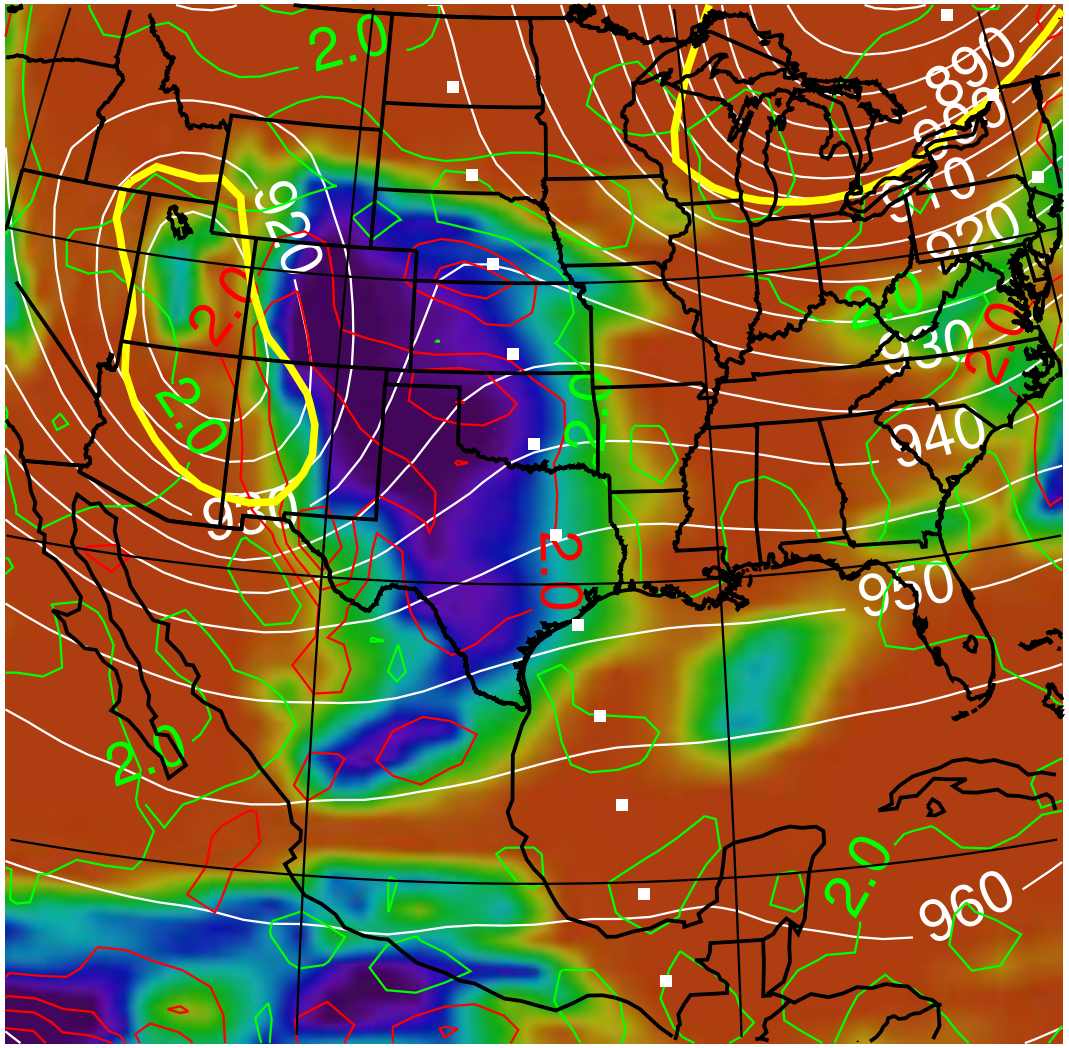
Z (dam)

Ascent (6 mb/hr)

Descent (6 mb/hr)

Trop (EPV=2.5)

00 UTC on 13 November, 2004 at 300.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

72 hr fcst

High CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

Z (dam)

Ascent (4 mb/hr)

Descent (4 mb/hr)

Trop (EPV=2.5)