Met briefing, AM 041111

Weather and cloud outlook for Thursday and Friday

It looks like the front will pass through a bit sooner than expected, which means that the rain (if any) will be over by noon. Winds will begin to change to a northerly direction today, bringing cold air by tomorrow. Highs will be 10 degrees cooler tomorrow (Friday). Wind forecast for tomorrow is the same as it has been – from the north at 10 to 15. I foresee no weather issues for the flight tomorrow.

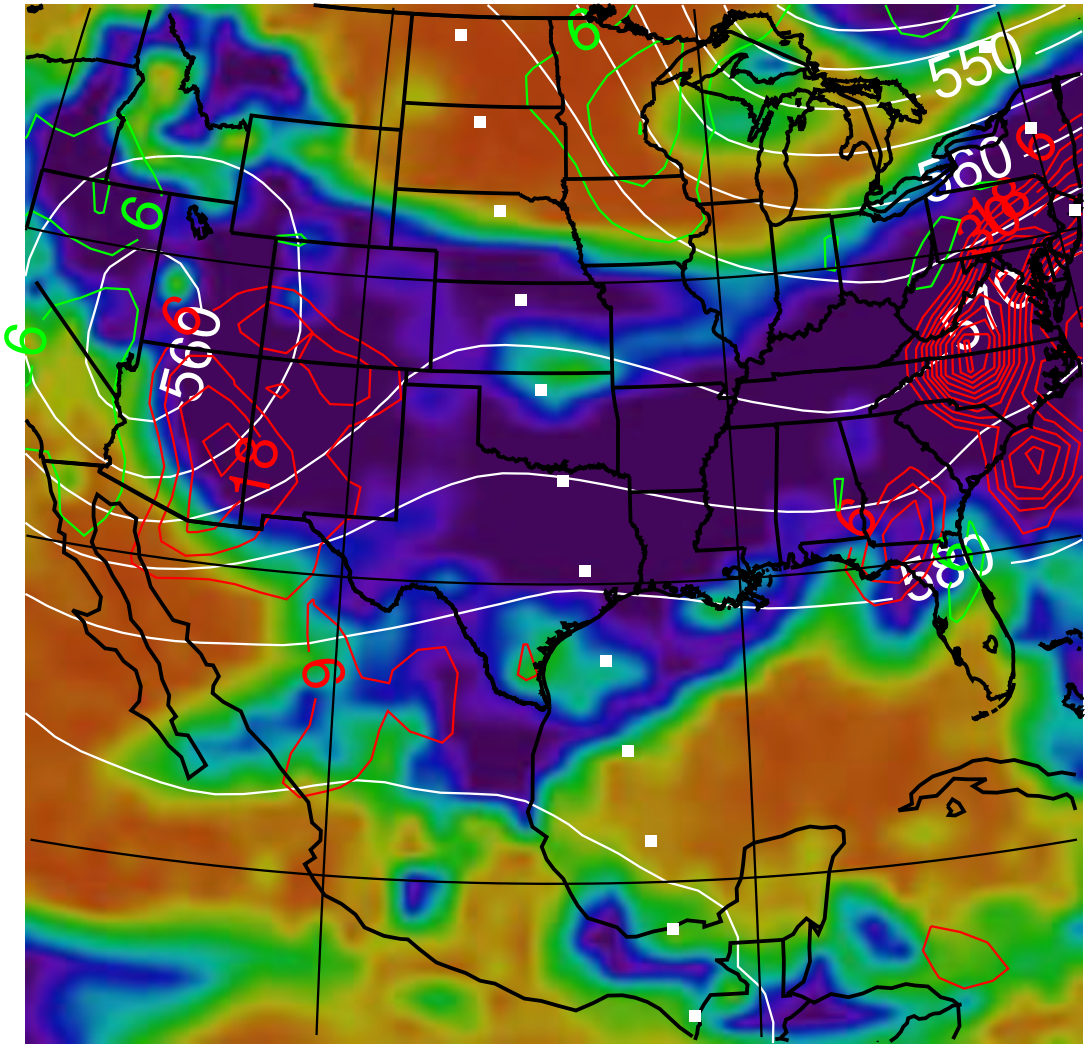
The dicey part is understanding what the model cloud forecasts mean, especially for the ARM site. The overall situation has lingering low clouds from the previous frontal passage (which is not cold or dry enough to clear out the moisture), a weak ridge over the Houston/Dallas, Oklahoma region, and an approaching upper level short wave from the west. By tomorrow at 18Z, this short wave will be sitting over a location just east of Las Vegas. Most of the vertical velocity and thick cloud associated with this wave, though, will be probably be no further east than the Texas panhandle (based on the NMC/GFS model – first three plots). I say "probably" because the eta model has a substantially weaker upper level ridge, and puts the extensive cloud fields about 400-500 km further east (next 2 plots). At this point, I am inclined to believe the GFS because the Euro model is in better agreement with it.

As far as low and boundary layer cloud, this is an issue from the Gulf (boundary layer cloud) into Oklahoma (low cloud – next two plots). The Norman office is now calling for partly cloudy skies tomorrow. TAFS for OKC do not go out that far yet, but are calling for overcast at 12Z tomorrow. The MOS guidance (which, after all, is just the point output of the plots from the various models that I am attaching), suggests overcast until the morning hours, then broken and scattered clouds after that. The ETA MOS guidance loses its overcast at 21Z, the GFS at 18Z, consistent with the cloudier tendencies of the ETA model in this case. You can look at the MOS (Model Output Statistics) at http://www.srh.noaa.gov/hgx/models.htm.

My overall assessment of this complicated picture is as follows. I think the likelihood of really solid clouds over the portions of the Aura track we are likely to overfly is greatest from just north of Houston into central Oklahoma. This is because of the wraparound moisture from the 850 mb low that is passing today and will be over Tennessee tomorrow (the last plot). The upper level wave over Las Vegas will give us, at most, some thin outflow cirrus at upper levels. This will be more extensive as we go into Kansas, but from central Nebraska northward things should be clear at all levels. There is a good chance for clear patches over the Gulf – clouds will be mostly boundary layer puffies. I believe that the chances for clear patches over the ARM site are good, but there will be low clouds in the area.

I apologize for the extraneous pages attached to the plots from the eta model..

18 UTC on 12 November, 2004 at 500.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

42 hr fcst

Total CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

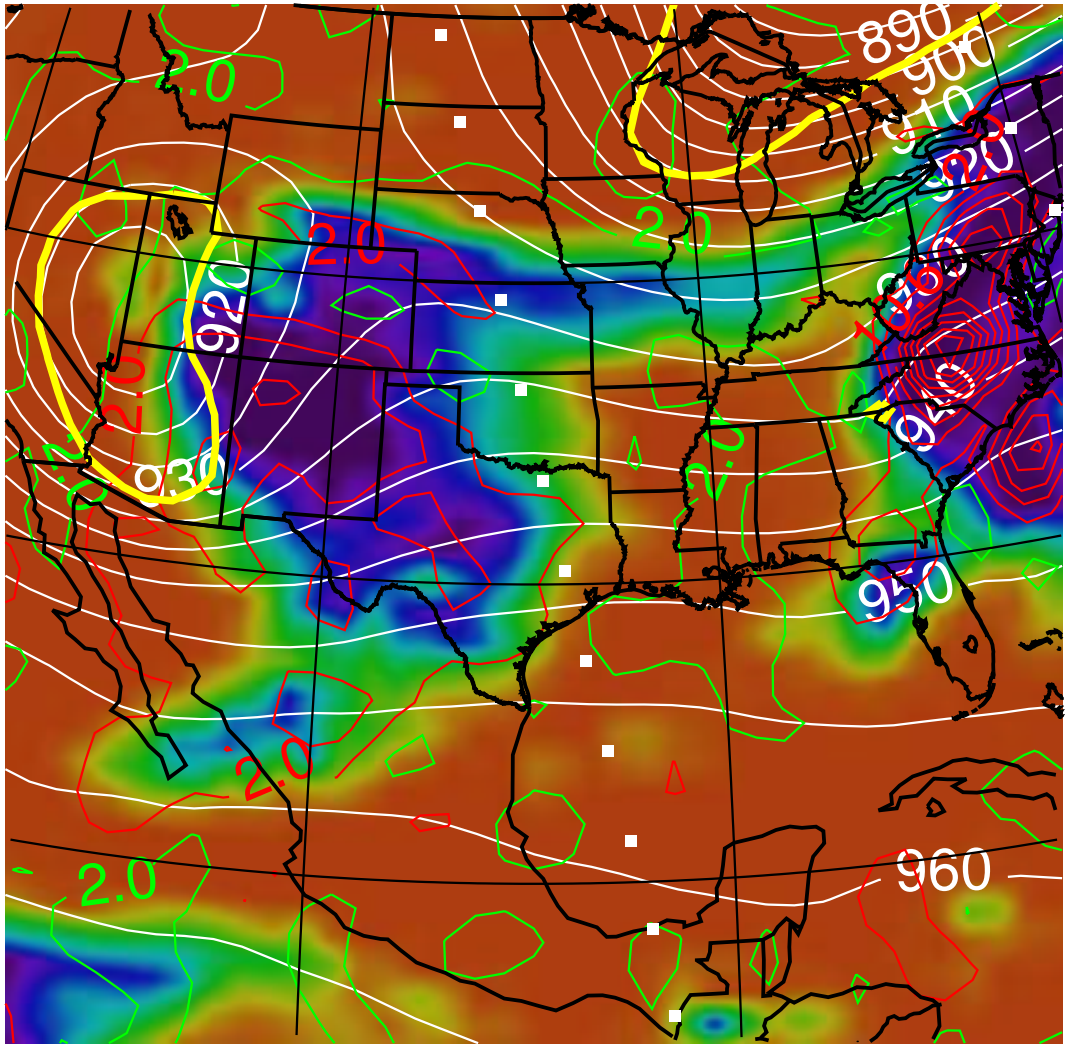
Z (dam)

Ascent (6 mb/hr)

Descent (6 mb/hr)

Trop (EPV=2.5)

18 UTC on 12 November, 2004 at 300.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

42 hr fcst

High CF ()

-0.20
-0.05
0.10
0.25
0.40
0.55
0.70
0.85
1.00

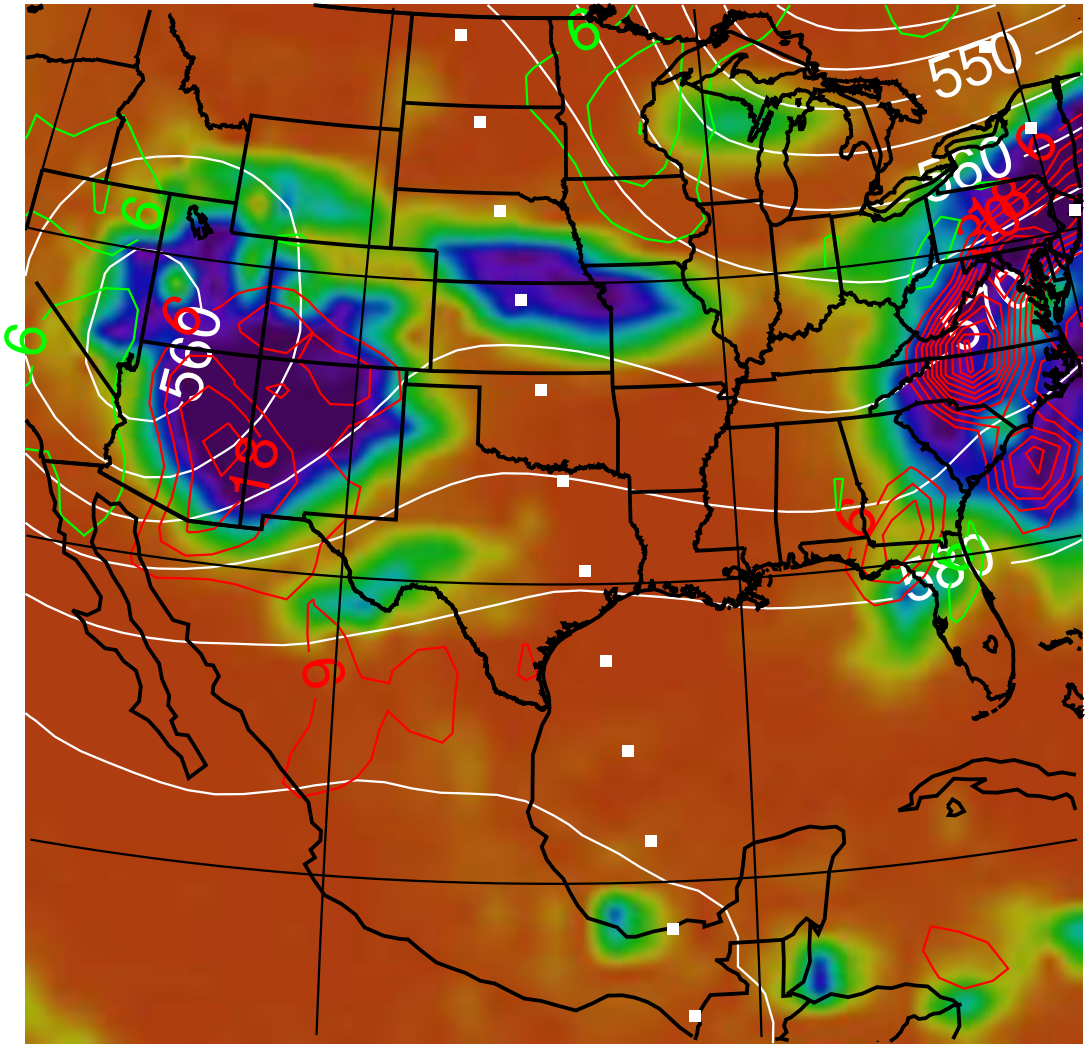
Z (dam)

Ascent (4 mb/hr)

Descent (4 mb/hr)

Trop (EPV=2.5)

18 UTC on 12 November, 2004 at 500.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

42 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)

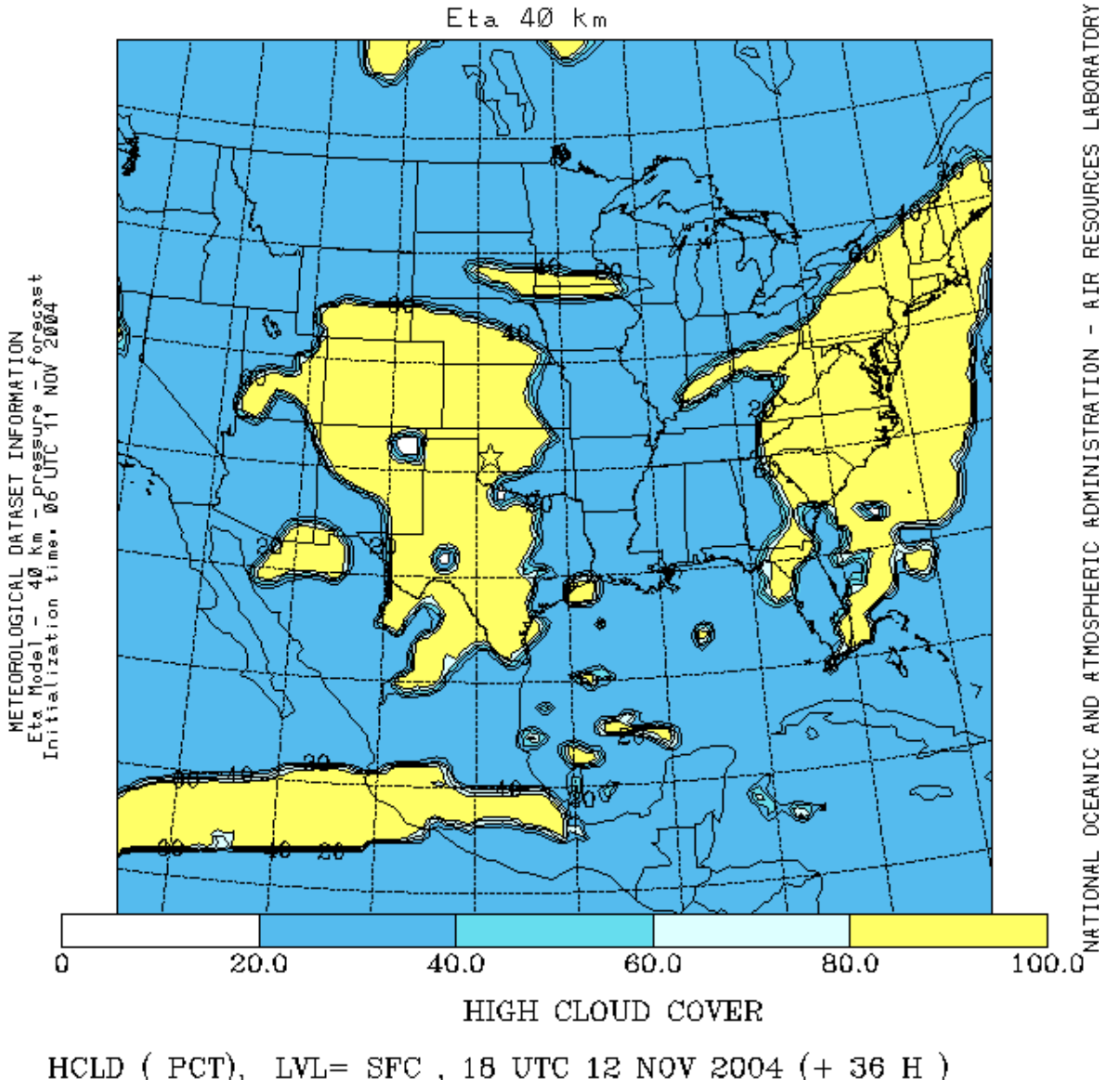
Map centered over: 35.64 -99.25

Another map	Another product	Another location	Start over

Runtime messages

NOAA Air Resources Laboratory

This product was produced by an Internet user on the NOAA Air Resources Laboratory's web site. See the disclaimer for further information (http://www.arl.noaa.gov/ready/disclaim.html).



READY READY
About READY About READY
NOAA Air Resources Laboratory NOAA Air Resources Laboratory
Disclaimer Disclaimer
Frequently Asked Questions Frequently Asked Questions
Main Page Main Page
Run with Archived Data Run with Archived Data
Run with Forecast Data Run with Forecast Data
Registration Instructions Registration Instructions
Model Description Model Description
Tools Tools
Main Page Main Page
Air Quality Forecasts Air Quality Forecasts
Volcanic Ash Model Volcanic Ash Model
Gaussian Plume Model Gaussian Plume Model
MOS Dispersion MOS Dispersion
U.S. Trajectory Forecasts U.S. Trajectory Forecasts
Ballooning Resources Ballooning Resources
Ensemble VOG Forecast Ensemble VOG Forecast
Smoke Forecasting Smoke Forecasting
Source Attribution Source Attribution
Tools Tools
Forecast - Global (Main Page) Forecast - Global (Main Page)
Forecast - North America Forecast - North America
Forecast - Model Animations Forecast - Model Animations
U.S. Current Weather U.S. Current Weather
Archived - Global Archived - Global
Archived - North America Archived - North America
Chesapeake Bay, USA Chesapeake Bay, USA
Tools Tools
Main Page Main Page
RSMC Washington RSMC Washington
RSMC/WMO Information RSMC/WMO Information
Current RSMC Products Current RSMC Products
NOAA/NRC NOAA/NRC
Tools Tools
What’s New What’s New
Model Data Availability Model Data Availability
Text Data Availability Text Data Availability
Current Operational News Current Operational News
NOAA NCEP Operations NOAA NCEP Operations
NOAA NCEP Model Status NOAA NCEP Model Status
NWSTG Status NWSTG Status
Comments/Questions Comments/Questions

Mailing List Mailing List
ARL HQ Modeling Group ARL HQ Modeling Group

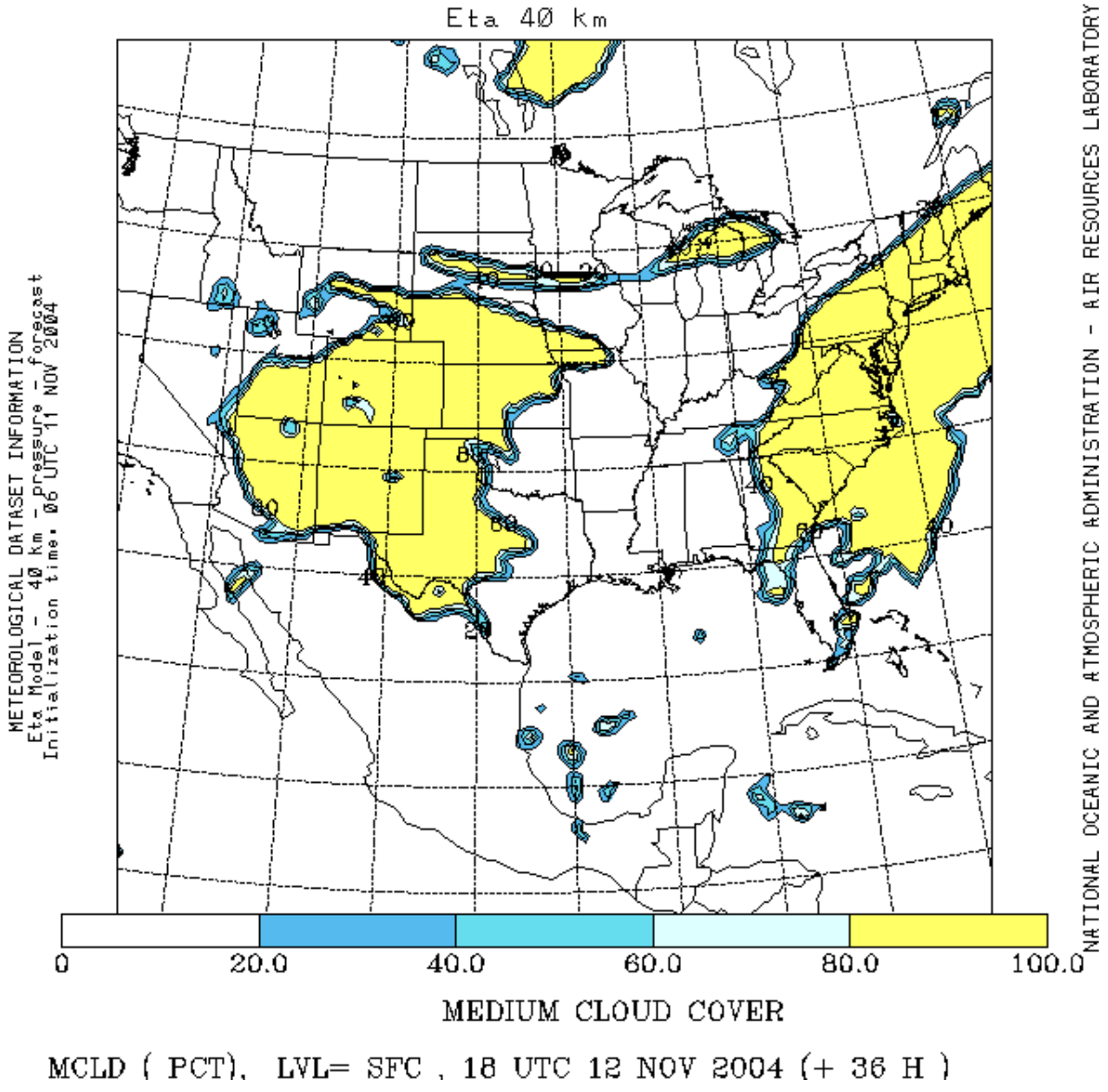
Map centered over: 35.64 -99.25

Another map	Another product	Another location	Start over

Runtime messages

NOAA Air Resources Laboratory

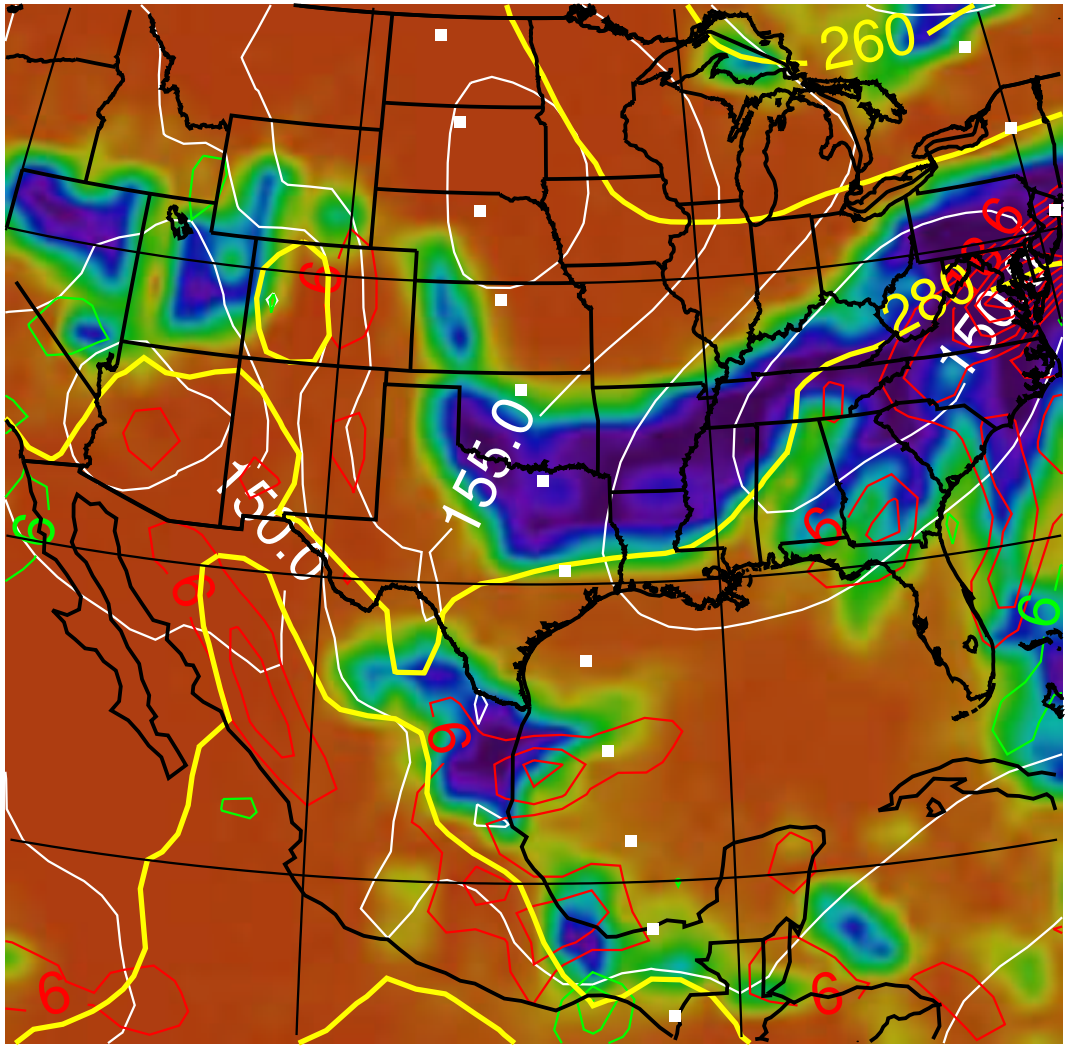
This product was produced by an Internet user on the NOAA Air Resources Laboratory's web site. See the disclaimer for further information (http://www.arl.noaa.gov/ready/disclaim.html).



READY READY
About READY About READY
NOAA Air Resources Laboratory NOAA Air Resources Laboratory
Disclaimer Disclaimer
Frequently Asked Questions Frequently Asked Questions
Main Page Main Page
Run with Archived Data Run with Archived Data
Run with Forecast Data Run with Forecast Data
Registration Instructions Registration Instructions
Model Description Model Description
Tools Tools
Main Page Main Page
Air Quality Forecasts Air Quality Forecasts
Volcanic Ash Model Volcanic Ash Model
Gaussian Plume Model Gaussian Plume Model
MOS Dispersion MOS Dispersion
U.S. Trajectory Forecasts U.S. Trajectory Forecasts
Ballooning Resources Ballooning Resources
Ensemble VOG Forecast Ensemble VOG Forecast
Smoke Forecasting Smoke Forecasting
Source Attribution Source Attribution
Tools Tools
Forecast - Global (Main Page) Forecast - Global (Main Page)
Forecast - North America Forecast - North America
Forecast - Model Animations Forecast - Model Animations
U.S. Current Weather U.S. Current Weather
Archived - Global Archived - Global
Archived - North America Archived - North America
Chesapeake Bay, USA Chesapeake Bay, USA
Tools Tools
Main Page Main Page
RSMC Washington RSMC Washington
RSMC/WMO Information RSMC/WMO Information
Current RSMC Products Current RSMC Products
NOAA/NRC NOAA/NRC
Tools Tools
What’s New What’s New
Model Data Availability Model Data Availability
Text Data Availability Text Data Availability
Current Operational News Current Operational News
NOAA NCEP Operations NOAA NCEP Operations
NOAA NCEP Model Status NOAA NCEP Model Status
NWSTG Status NWSTG Status
Comments/Questions Comments/Questions

Mailing List Mailing List
ARL HQ Modeling Group ARL HQ Modeling Group

18 UTC on 12 November, 2004 at 850.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

42 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)

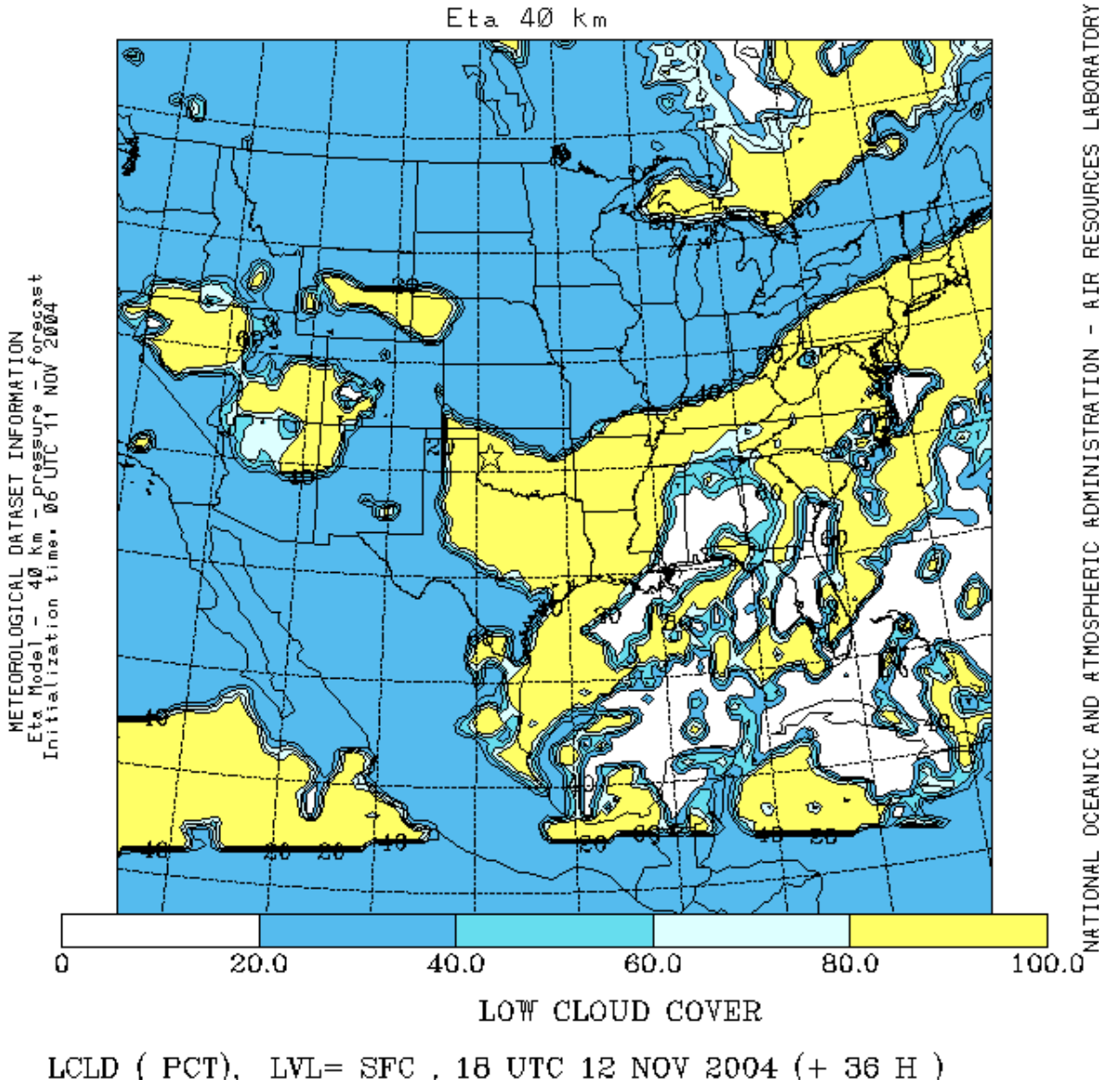
Map centered over: 35.64 -99.25

Another map	Another product	Another location	Start over

Runtime messages

NOAA Air Resources Laboratory

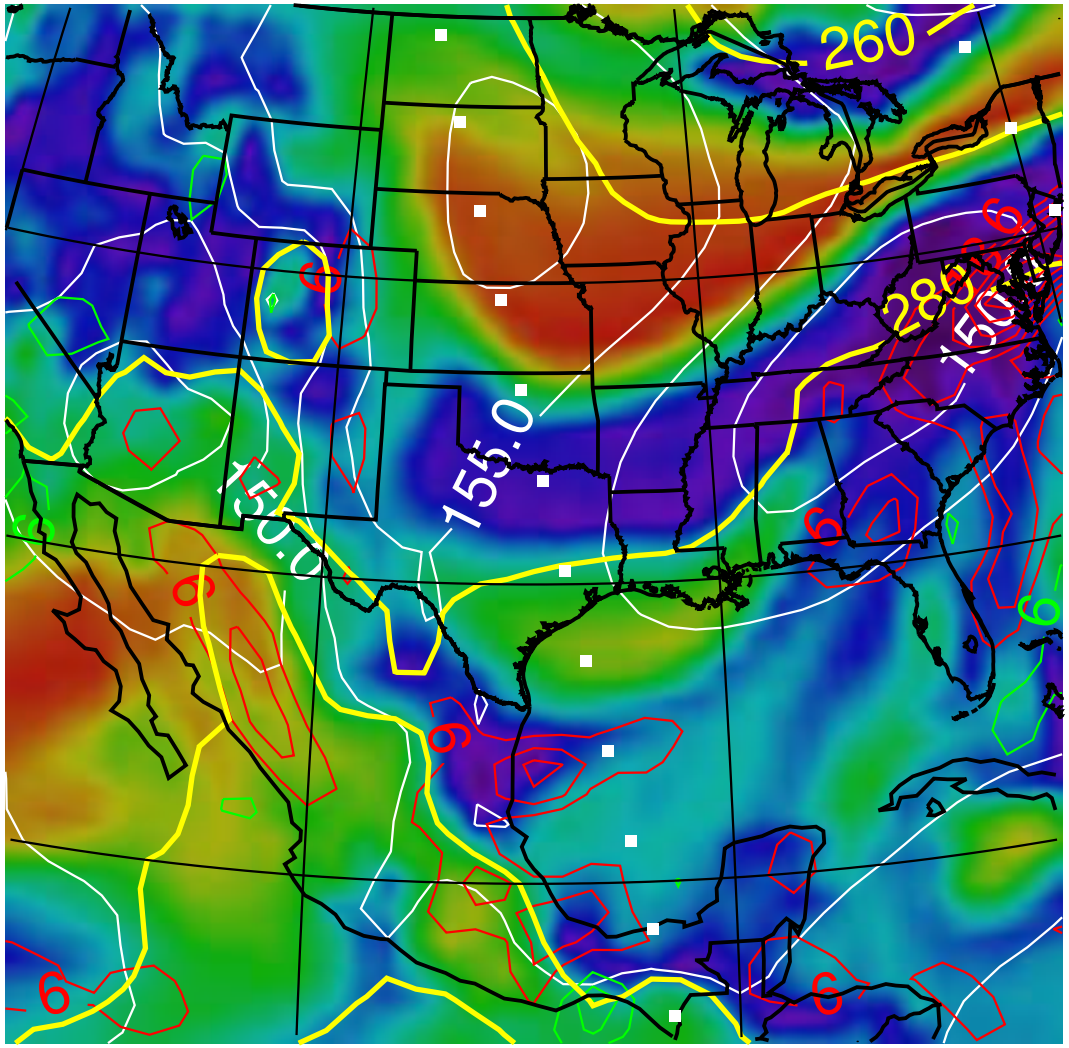
This product was produced by an Internet user on the NOAA Air Resources Laboratory's web site. See the disclaimer for further information (http://www.arl.noaa.gov/ready/disclaim.html).



READY READY
About READY About READY
NOAA Air Resources Laboratory NOAA Air Resources Laboratory
Disclaimer Disclaimer
Frequently Asked Questions Frequently Asked Questions
Main Page Main Page
Run with Archived Data Run with Archived Data
Run with Forecast Data Run with Forecast Data
Registration Instructions Registration Instructions
Model Description Model Description
Tools Tools
Main Page Main Page
Air Quality Forecasts Air Quality Forecasts
Volcanic Ash Model Volcanic Ash Model
Gaussian Plume Model Gaussian Plume Model
MOS Dispersion MOS Dispersion
U.S. Trajectory Forecasts U.S. Trajectory Forecasts
Ballooning Resources Ballooning Resources
Ensemble VOG Forecast Ensemble VOG Forecast
Smoke Forecasting Smoke Forecasting
Source Attribution Source Attribution
Tools Tools
Forecast - Global (Main Page) Forecast - Global (Main Page)
Forecast - North America Forecast - North America
Forecast - Model Animations Forecast - Model Animations
U.S. Current Weather U.S. Current Weather
Archived - Global Archived - Global
Archived - North America Archived - North America
Chesapeake Bay, USA Chesapeake Bay, USA
Tools Tools
Main Page Main Page
RSMC Washington RSMC Washington
RSMC/WMO Information RSMC/WMO Information
Current RSMC Products Current RSMC Products
NOAA/NRC NOAA/NRC
Tools Tools
What’s New What’s New
Model Data Availability Model Data Availability
Text Data Availability Text Data Availability
Current Operational News Current Operational News
NOAA NCEP Operations NOAA NCEP Operations
NOAA NCEP Model Status NOAA NCEP Model Status
NWSTG Status NWSTG Status
Comments/Questions Comments/Questions

Mailing List Mailing List
ARL HQ Modeling Group ARL HQ Modeling Group

18 UTC on 12 November, 2004 at 850.0 mb



NMC, Grid: GG1X1

Seq: E01, Spec: SAVN170L42

42 hr fcst

RH at 850 MB (%)

-12.0
2.0
16.0
30.0
44.0
58.0
72.0
86.0
100.0

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