December 31st, 2007
Snowfall

Summary

An Old Fashioned Winter, or at least December 2007, ended on a snowy note across Vermont and northern New York. A fast moving coastal storm passed offshore of southern New England during the morning of December 31st, yet it was enough to deliver a moderate snowfall to much of Vermont and the Champlain Valley of New York. Snowfall totals from this "end of the year" storm ranged from 2 to 4 inches in the St. Lawrence River Valley to 3 to 7 inches in the Adirondacks and Champlain Valley of New York as well as much of Vermont. These snowfall totals added to an already significant December snowfall throughout the North Country, including the Champlain Valley where Burlington's December snowfall of 46.2 was the 4th highest December total since records have been kept in 1883.

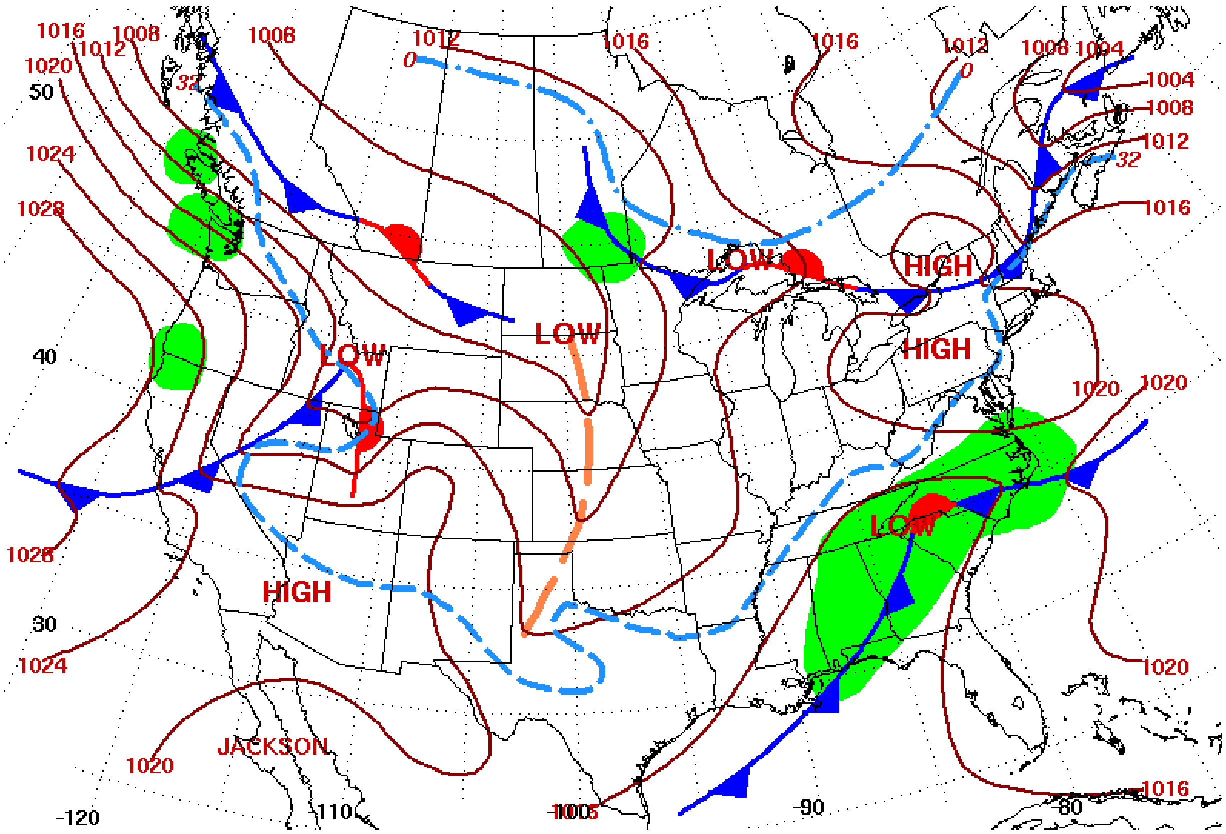
On Sunday morning (30th), a stationary frontal boundary was draped across the southeast United States with weak low pressure slowly developing along this boundary. This frontal boundary tapped moisture from the Gulf of Mexico and was the focus for much needed rainfall in the drought affected areas of the southeast United States during Sunday. Eventually, a surface low lifted out of the southeast United States to the Mid-Atlantic coast Sunday night and then quickly moved east of Cape Cod by Monday morning.

Snow began to overspread New York and Vermont around Midnight Monday (31st) with snowfall rates rapidly increasing to near an inch per hour at times, but this was a quick-hit storm with steady accumulating snowfall ending across much of Vermont and northern New York by mid-morning.

Meanwhile, another strong disturbance moved from the Pacific Northwest on Sunday (30th) to the Mississippi River Valley by Monday afternoon (31st) with a New Year's Day arrival expected across New England and New York.

Surface Map on Sunday December 30th at 7am

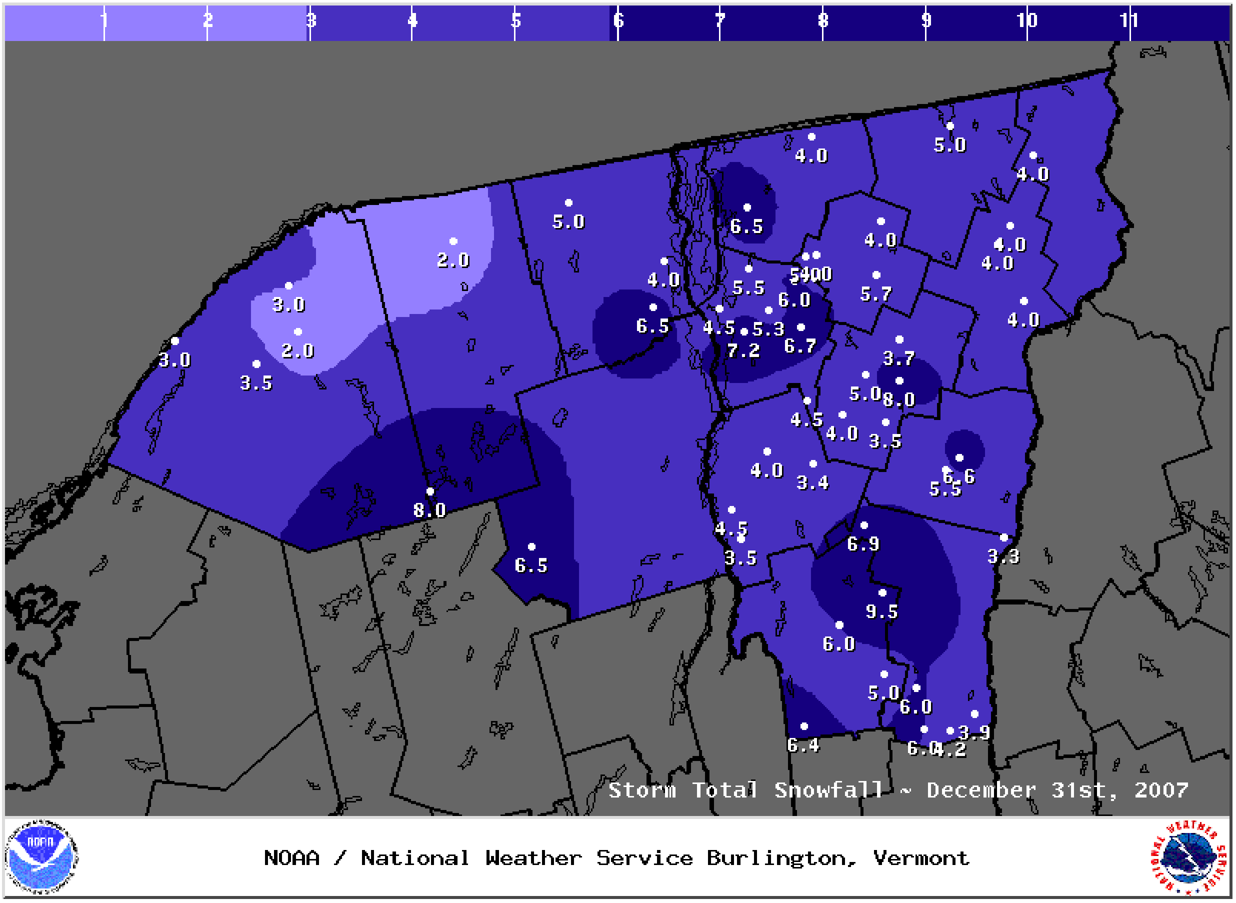
Click on image to enlarge



Surface Weather Map at 7:00 A.M. E.S.T.

Snowfall Map

Click on image to enlarge



Snowfall Reports

PUBLIC INFORMATION STATEMENT
SPOTTER REPORTS
NATIONAL WEATHER SERVICE BURLINGTON VT

THE FOLLOWING ARE UNOFFICIAL OBSERVATIONS TAKEN DURING THE PAST 24 HOURS FOR THE STORM THAT HAS BEEN AFFECTING OUR REGION. APPRECIATION IS EXTENDED TO HIGHWAY DEPARTMENTS...COOPERATIVE OBSERVERS...SKYWARN SPOTTERS AND MEDIA FOR THESE REPORTS. THIS SUMMARY IS ALSO AVAILABLE ON OUR HOME PAGE AT WEATHER.GOV/BURLINGTON

********************STORM TOTAL SNOWFALL********************

LOCATION	STORM TOTAL SNOWFALL (INCHES)	TIME/DATE OF MEASUREMENT	COMMENTS
NEW YORK			
...CLINTON COUNTY...			
PERU	6.5	1254 PM 12/31	
ELLENBURG DEPOT	5.0	700 AM 1/1	COOP
PLATTSBURGH	4.0	855 AM 12/31	NEWS MEDIA
SCHUYLER FALLS	3.5	823 AM 12/31	HAM OPERATOR
...ESSEX COUNTY...			
NEWCOMB	6.5	955 AM 12/31	
...FRANKLIN COUNTY...			
TUPPER LAKE	8.0	700 AM 1/1	COOP
MALONE	2.0	836 AM 12/31	
...ST. LAWRENCE COUNTY...			
CANTON	3.5	841 AM 12/31	
NORFOLK	3.0	942 AM 12/31	
OGDENSBURG	3.0	817 AM 12/31	HAM OPERATOR
POTSDAM	2.0	620 AM 12/31	SPOTTER
VERMONT			
...ADDISON COUNTY...			
BRIDPORT	4.5	817 AM 12/31	SPOTTER
NEW HAVEN	4.0	842 AM 12/31	
SHOREHAM	3.5	822 AM 12/31	HAM OPERATOR
SOUTH LINCOLN	3.4	700 AM 1/1	COOP
...CALEDONIA COUNTY...			
SAINT JOHNSBURY	4.0	907 AM 12/31	
SUTTON	4.0	842 AM 12/31	
WHEELOCK	4.0	1227 PM 12/31	
...CHITTENDEN COUNTY...			
SOUTH BURLINGTON	7.2	526 PM 12/31	NWS OFFICE
JERICHO (NASHVILLE)	6.7	1100 PM 12/31	NWS EMPLOYEE
NORTH UNDERHILL	6.0	543 PM 12/31	NWS EMPLOYEE
MILTON	5.5	1226 PM 12/31	NWS EMPLOYEE
ESSEX	5.3	1253 PM 12/31	NWS EMPLOYEE
COLCHESTER	4.5	1229 PM 12/31	NWS EMPLOYEE
HANKSVILLE	4.5	700 AM 1/1	COOP
ESSEX JUNCTION	3.0	822 AM 12/31	HAM OPERATOR

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...ESSEX COUNTY...
   ISLAND POND HISTORIC   4.0   955 AM 12/31

...FRANKLIN COUNTY...
   SAINT ALBANS           6.5   700 AM   1/1   NWS EMPLOYEE
   BERKSHIRE              4.0   833 AM 12/31

...LAMOILLE COUNTY...
   MORRISVILLE            5.7   700 AM   1/1   COOP
   CAMBRIDGE              5.0   400 PM 12/31   SPOTTER
   EDEN                   4.0   824 AM 12/31   COOP
   JEFFERSONVILLE         4.0   908 AM 12/31

...ORANGE COUNTY...
   CORINTH                6.6   700 AM   1/1   COOP
   CHELSEA                5.5   700 AM   1/1   COOP
   UNION VILLAGE DAM      3.3   851 AM 12/31

...ORLEANS COUNTY...
   NEWPORT                5.0   700 AM   1/1   COOP

...RUTLAND COUNTY...
   KILLINGTON             9.5  1003 AM 12/31
   PAWLET                 6.4   956 AM 12/31
   RUTLAND                6.0   909 AM 12/31   LAW ENFORCEMENT
   MOUNT HOLLY            5.0   902 AM 12/31

...WASHINGTON COUNTY...
   MONTPELIER             8.0   700 AM   1/1   COOP
   MORETOWN NUMBER 8      5.0   916 AM 12/31
   WAITSFIELD             4.0   834 AM 12/31
   WORCESTER              3.7   854 AM 12/31
   NORTHFIELD             3.5   835 AM 12/31

...WINDSOR COUNTY...
   ROCHESTER              6.9   700 AM   1/1   COOP
   ANDOVER                6.0   900 AM 12/31
   LUDLOW                 6.0   901 AM 12/31
   CHESTER                4.2   612 AM 12/31   SPOTTER
   SPRINGFIELD            3.9   708 AM 12/31   SPOTTER

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December Snowfall Climatology

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PUBLIC INFORMATION STATEMENT...UPDATED
NATIONAL WEATHER SERVICE BURLINGTON VT
805 PM EST MON DEC 31 2007

...4TH SNOWIEST DECEMBER ON RECORD AT BURLINGTON...

AS OF 7 PM EST...BURLINGTON INTERNATIONAL AIRPORT HAS RECEIVED 46.2
INCHES OF SNOW FOR THE MONTH OF DECEMBER. THIS PLACES BTV AT THE 4TH
SNOWIEST DECEMBER EVER. THE SNOWIEST DECEMBER EVER OCCURRED IN 1970
WHEN 56.7 INCHES FELL. LAST DECEMBER WE MEASURED ONLY 10.0 INCHES
FOR THE MONTH OF DECEMBER.

THE FOLLOWING ARE TOP 5 SNOWIEST DECEMBER`S EVER AT BTV:
1.) 56.7"   1970
2.) 53.6"   2003
3.) 50.8"   1968
4.) 46.2"   2007
5.) 44.0"   1995
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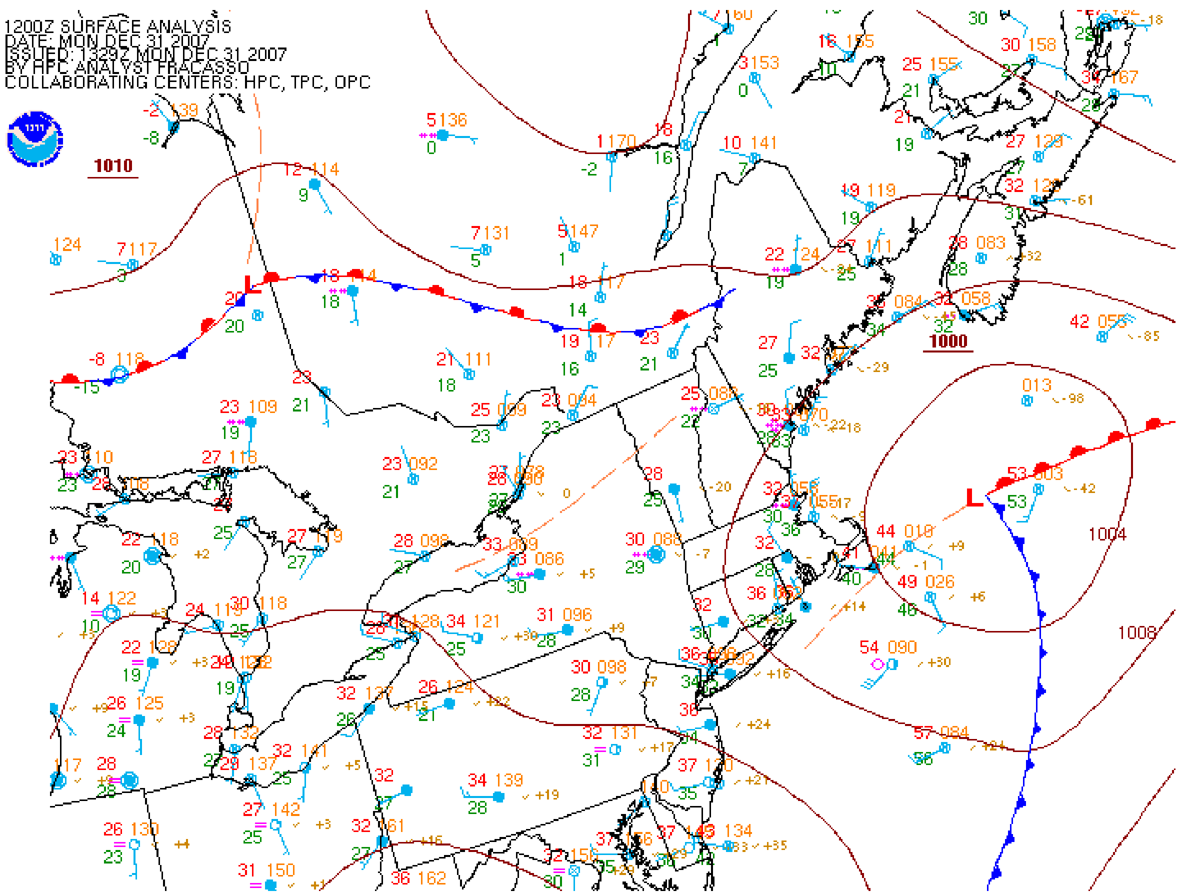
Surface Map on Monday, December 31st at 7am

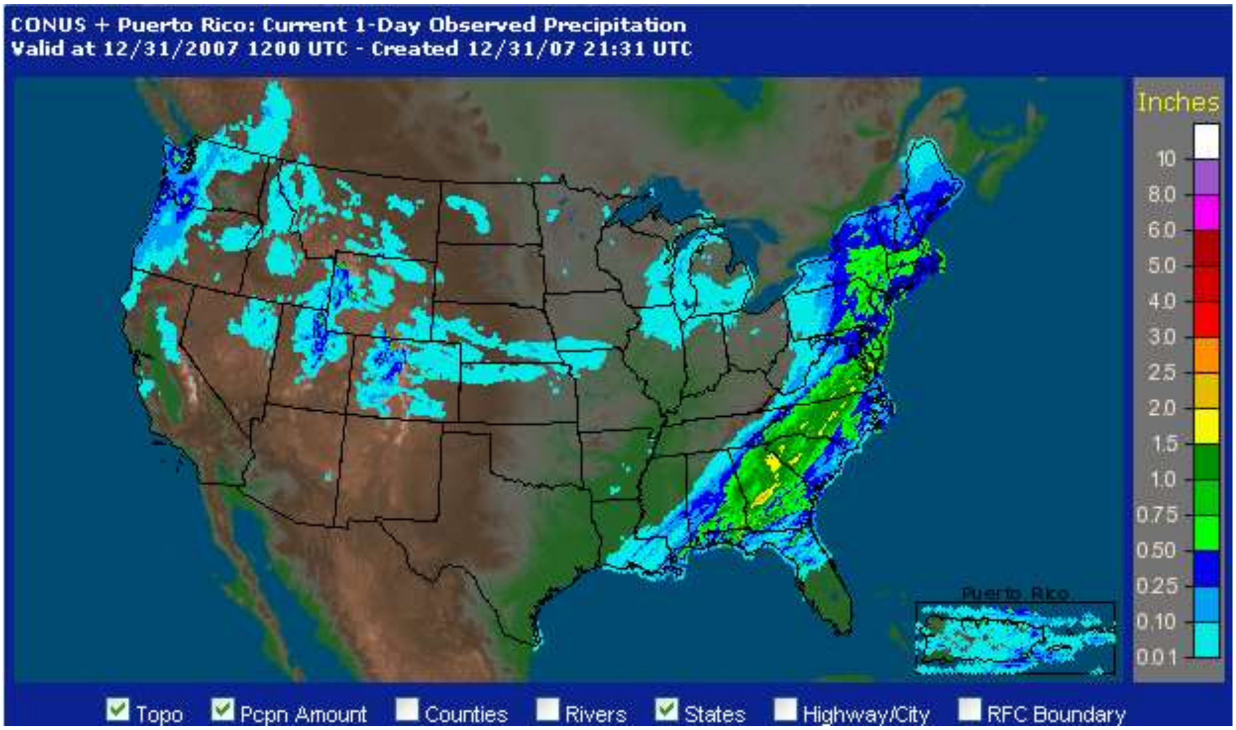
Click on image to enlarge



Surface low pressure traveled near the 40 degree north latitude, 70 degree west longitude coordinates early Monday morning before moving into the Gulf of Maine. Climatologically, the heaviest snowfalls for Vermont and northern New York occur when surface low pressure travels north and west of this 40N/70W benchmark, preferably between Cape Cod and Boston, Massachusetts.

Precipitation ending Monday, December 31st at 7am

Click on image to enlarge

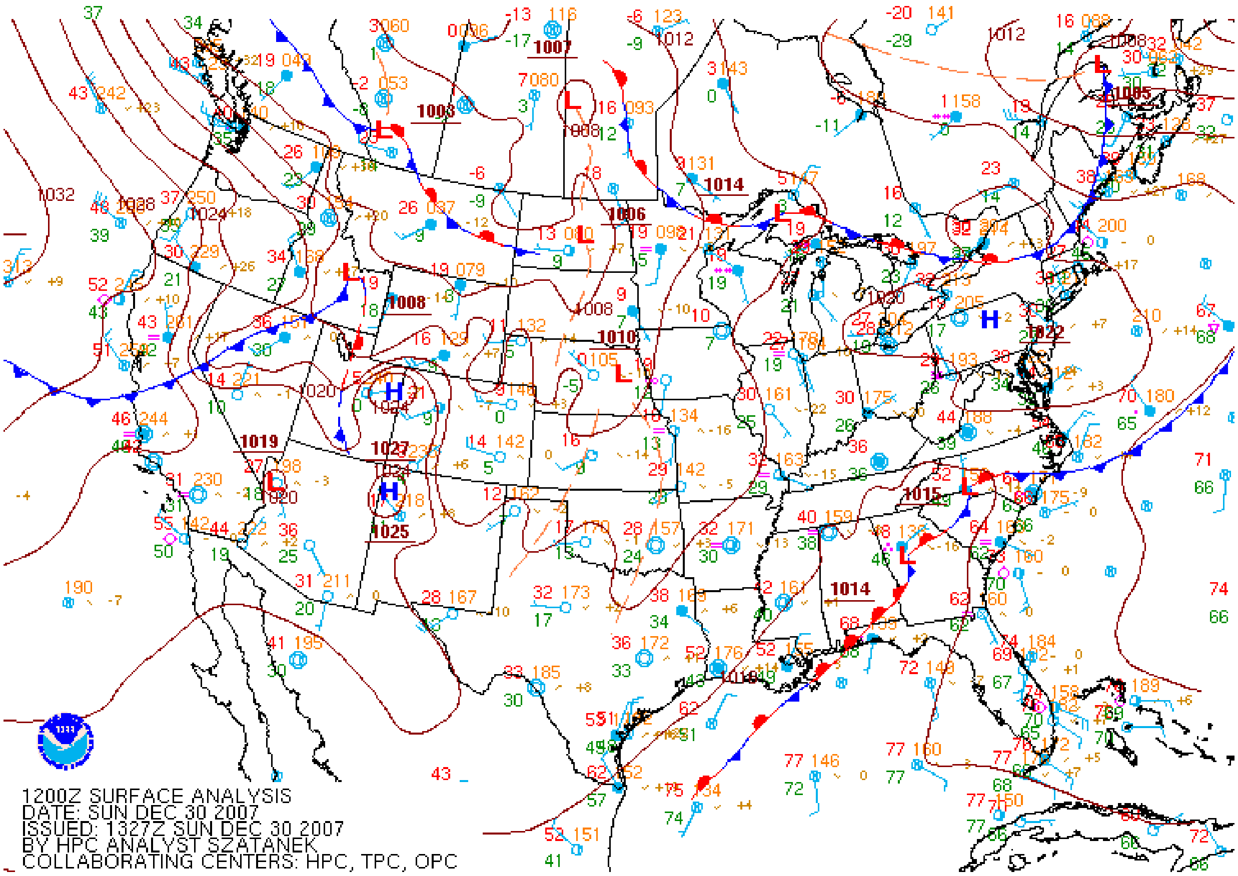


24 hour observed precipitation ending at 7 am Monday, December 31st shows the much needed rainfall in the drought affected regions of the southeast United States

Evolution of Surface Low Track

7am EST Sunday 12/30 to 7am EST Monday 12/31

Click on image to enlarge

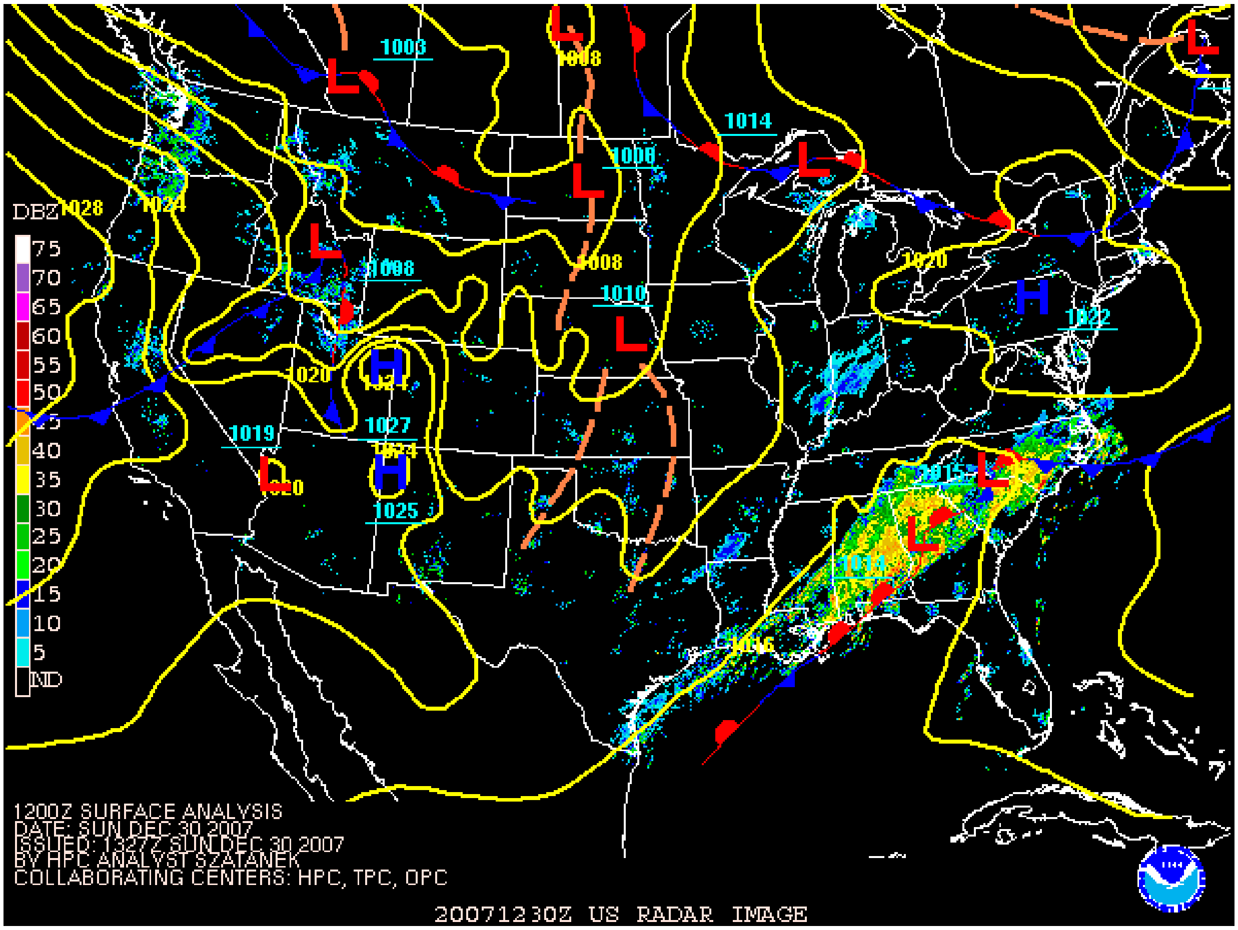


A stationary frontal boundary with multiple waves of low pressure started to meandered across the southeast United States on Sunday morning (12/30). Eventually, a surface low would emerge off the Mid-Atlantic coast Sunday night and pass offshore of Cape Cod by Monday morning (12/31).

Radar and Surface Time Lapse

Sunday Morning at 7am EST (12/30) to Monday Afternoon at 1pm EST (12/31)

Click on image to enlarge

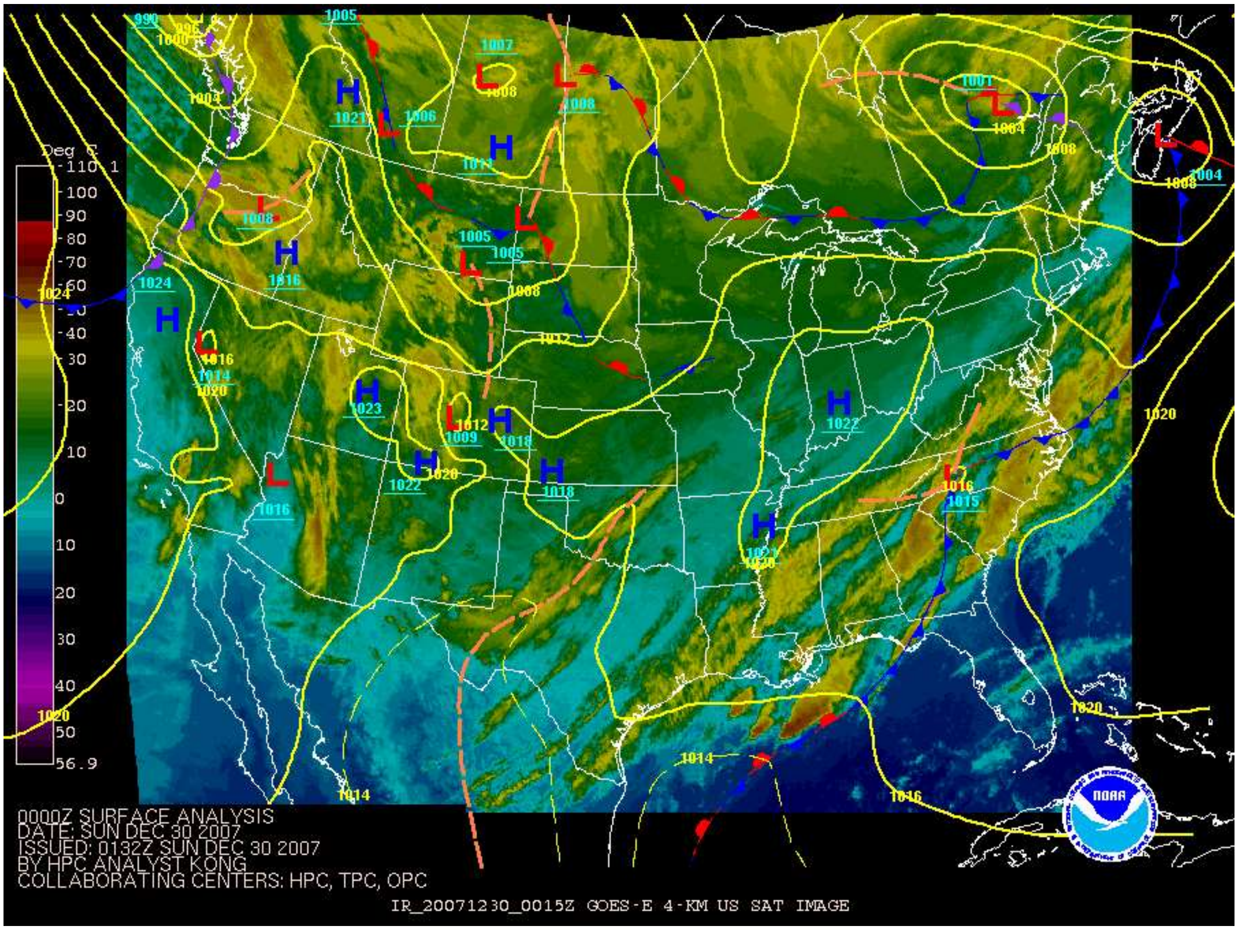


Much needed rains in drought stricken parts of the southeast United States on Sunday (12/30) lift northeast reaching southern New England as mixed snow and rain Sunday night. Snow overspreads Vermont and northern New York around Midnight (EST) on Monday (12/31), but quickly exits the much of the region by mid-morning Monday.

Infrared Satellite and Surface Time Lapse

Saturday Night at 7pm EST (12/29) to Monday Afternoon at 1pm EST (12/31)

Click on image to enlarge



Abundant moisture tapped from the Gulf of Mexico traveled along a frontal boundary draped across the Gulf coast and the southeast United States Saturday night and continued Sunday. This brought some much needed rainfall to drought stricken portions of the southeast United States and Carolinas. Eventually, this moisture and surface low would move to the Mid-Atlantic coast Sunday night and affect New England late Sunday night and Monday morning. Meanwhile, another energetic disturbance has moved from the Pacific Northwest on Sunday (12/30) into the Mississippi River Valley by Monday afternoon (12/31) and will eventually affect the Northeast on New Year's Day 2008.