



St. Patrick's Day Nor'easter 16-17 March 2007



Summary

Mother Nature on St. Patrick's Day, left no doubt that winter still had several more days to go before spring officially arrived Tuesday evening (March 20th - 805 pm EDT). Snowfall totals from the St. Patrick's Day storm ranged from 4 to 6 inches within the Saint Lawrence River Valley (western edge of the storm) to a rather uniform 10 to 14 inches across the rest of Northern New York and Vermont.

This occurred, after a week that felt more like Spring, as temperatures climbed in the 40s to 60s on Tuesday (13th) and Wednesday (14th), which helped greatly reduce the snow pack (including some bare spots) across Vermont and Northern New York. In addition, several weak areas of low pressure moved along a boundary draped across the region and delivered an half to one inch of rainfall on Wednesday (14th) and Thursday (15th). This combination of snow melt and rainfall caused increased runoff into ice-covered rivers, that resulted in scattered ice jams and localized flooding on the 14th and 15th in both Vermont and northern New York.

This boundary pushed south of the region as a cold front on Thursday afternoon and delivered colder air and high pressure across the area Thursday night and Friday (16th). The cold front continued to move south Thursday night, before it became stationary across the Carolinas on Friday morning (16th), where low pressure developed along the boundary.

On Friday, a coupled jet stream dipped across the Mississippi River Valley and southeast United States and turned sharply up the East coast. This allowed the storm to intensify rapidly during Friday and move northeast along the eastern seaboard. Wintry weather occurred across interior portions of the Mid-Atlantic states, including Washington D.C. and Philadelphia on Friday morning and moved north into New York City and Southern New England by noon.

Snow entered southern Vermont by mid to late afternoon, reaching the Adirondacks and Central Vermont by early evening and overspreading the entire region by late evening. Heavy snow started in southern Vermont by late evening and reached the rest of the region by Midnight Saturday (17th) with snowfall rates of 1 to 2 inches per hour at times. The snow mixed with sleet at times in the Connecticut River Valley early Saturday morning before gradually tapering off from south to north across Vermont and New York before sunrise and along the Canadian border by late morning.

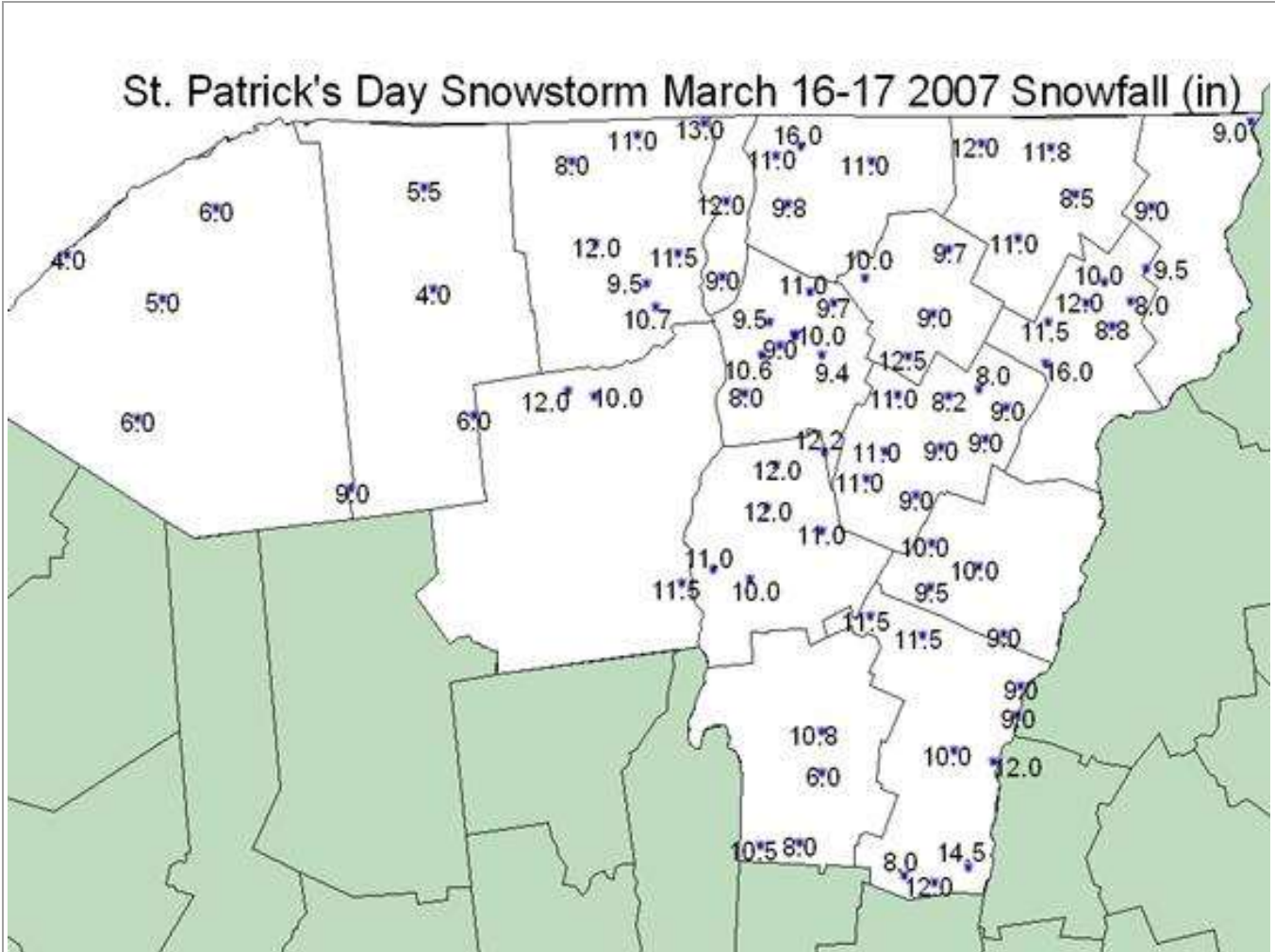
However, there was a second part to this storm that developed late Saturday afternoon and continued Sunday morning (18th)...called wrap-around and upslope. On Saturday morning, infra-red satellite clearly showed a dry slot (light green-aqua color) that developed and moved into Vermont, which quickly shutdown the steady snowfall. Meanwhile, deeper layered moisture in the wrap-around portion of the storm (light yellow) was producing snowfall across Ontario and the eastern Great Lakes.

During the course of late Saturday afternoon and Saturday night, as the surface low pulled further away from Vermont and Northern New York, the deeper layered wraparound snows moved into the region (yellow/tan). This snowfall became locally enhanced by favorable upslope flow (air moving up the slope of a mountain, lifting to a point of condensation, then falling as snow) along the northwest slopes of the Northern Adirondacks of New York and the Northern Green Mountains of Vermont. This snow continued until midday Sunday and then quickly dissipated.

An additional 2 to 5 inches of snowfall occurred across the northern Champlain Valley and other northern valleys in Vermont with 4 to 8 inches additional snowfall in communities

along the favored upslope regions of the Northern Adirondacks and Northern Green Mountains. Therefore, some two-day snowfall totals exceeded 18 inches, with many northern ski areas reporting around 2 feet of snow.

Snowfall Map for Nor'easter ending Saturday



Storm Total Snowfall from the Nor'Easter

Snowfall Reports from the Nor'Easter ending Saturday 3/17 (text)

PUBLIC INFORMATION STATEMENT
SPOTTER REPORTS
NATIONAL WEATHER SERVICE BURLINGTON VT
245 PM EDT SAT MAR 17 2007

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...			
ROUSES POINT	13.0	1101 AM 3/17	MEDIA
DANNEMORA	12.0	1123 AM 3/17	SPOTTER
PLATTSBURGH	11.5	910 AM 3/17	TV STATION
MOOERS	11.0	822 AM 3/17	HAM RADIO
PERU	10.7	710 AM 3/17	SPOTTER
SCHUYLER FALLS	9.5	823 AM 3/17	HAM RADIO
ELLENBURG DEPOT	8.0	600 AM 3/17	COOP
...ESSEX COUNTY...			
WILMINGTON	12.0	820 AM 3/17	SPOTTER
CROWN POINT	11.5	756 AM 3/17	SPOTTER
JAY	10.0	812 AM 3/17	HAM RADIO
...FRANKLIN COUNTY...			
TUPPER LAKE	9.0	709 AM 3/17	COOP
TUPPER LAKE	8.0	848 AM 3/17	PUBLIC
SARANAC LAKE	6.0	819 AM 3/17	HAM RADIO
MALONE	5.5	732 AM 3/17	COOP
DUANE	4.0	821 AM 3/17	HAM RADIO
...ST. LAWRENCE COUNTY...			
EDWARDS	6.0	738 AM 3/17	HAM RADIO
NORFOLK	6.0	816 AM 3/17	HAM RADIO
CANTON	5.0	947 AM 3/17	COOP
OGDENSBURG	4.0	742 AM 3/17	HAM RADIO
VERMONT			
...ADDISON COUNTY...			
MONKTON	12.0	1231 PM 3/17	SPOTTER
NEW HAVEN	12.0	827 AM 3/17	COOP
BRIDPORT	11.0	735 AM 3/17	SPOTTER
SOUTH LINCOLN	11.0	849 AM 3/17	COOP
CORNWALL	10.0	805 AM 3/17	COOP

...CALEDONIA COUNTY...

WALDEN	16.0	917 AM	3/17	SPOTTER
WHEELLOCK	12.0	1044 AM	3/17	SPOTTER
STANNARD	11.5	1100 AM	3/17	SPOTTER
SUTTON	10.0	826 AM	3/17	COOP
LYNDONVILLE	8.8	1125 AM	3/17	SPOTTER
EAST BURKE	8.0	920 AM	3/17	SPOTTER

...CHITTENDEN COUNTY...

HANKSVILLE	12.2	947 AM	3/17	COOP
SOUTH BURLINGTON	11.0	821 AM	3/17	HAM RADIO
WESTFORD	11.0	1200 PM	3/17	NWS EMPLOYEE
SOUTH BURLINGTON	10.6	1000 AM	3/17	NWS OFFICE
ESSEX CENTER	10.0	925 AM	3/17	SPOTTER
NORTH UNDERHILL	9.7	747 AM	3/17	NWS EMPLOYEE
COLCHESTER	9.5	1004 AM	3/17	NWS EMPLOYEE
JERICHO CENTER	9.4	1231 PM	3/17	NWS EMPLOYEE
ESSEX	9.0	710 AM	3/17	NWS EMPLOYEE
ESSEX JUNCTION	9.0	823 AM	3/17	HAM RADIO
ESSEX JUNCTION	8.0	748 AM	3/17	HAM RADIO
SHELBURNE	8.0	1027 AM	3/17	PUBLIC

...ESSEX COUNTY...

EAST HAVEN	9.5	932 AM	3/17	COOP
CANAAN	9.0	850 AM	3/17	COOP
ISLAND POND	9.0	1004 AM	3/17	COOP

...FRANKLIN COUNTY...

HIGHGATE CENTER	16.0	819 AM	3/17	HAM RADIO
ENOSBURG FALLS	11.0	849 AM	3/17	COOP
SWANTON	11.0	927 AM	3/17	SPOTTER
SAINT ALBANS	9.8	916 AM	3/17	NWS EMPLOYEE

...GRAND ISLE COUNTY...

NORTH HERO	12.0	1125 AM	3/17	SPOTTER
SOUTH HERO	9.0	1124 AM	3/17	SPOTTER

...LAMOILLE COUNTY...

STOWE	12.5	1252 PM	3/17	SPOTTER
JEFFERSONVILLE	10.2	700 AM	3/17	COOP
JEFFERSONVILLE	10.0	749 AM	3/17	SPOTTER
EDEN	9.7	850 AM	3/17	COOP
MORRISVILLE	9.0	825 AM	3/17	COOP

...ORANGE COUNTY...

BROOKFIELD	10.0	755 AM	3/17	COOP
CHELSEA	10.0	749 AM	3/17	COOP
RANDOLPH CENTER	9.5	1012 AM	3/17	SPOTTER
SOUTH STRAFFORD	9.0	834 AM	3/17	SPOTTER

...ORLEANS COUNTY...

JAY	12.0	1130 PM	3/17	TOWN OFFICIAL
NEWPORT	11.8	700 AM	3/17	COOP
EAST ALBANY	11.0	831 AM	3/17	COOP
BROWNINGTON	8.5	511 AM	3/17	SPOTTER

...RUTLAND COUNTY...

RUTLAND	10.8	1005 AM	3/17	COOP
PAWLET	10.5	636 AM	3/17	SPOTTER
DANBY FOUR CORNERS	8.0	1005 AM	3/17	COOP
CLARENDON	6.0	1231 AM	3/17	VT AOT

...WASHINGTON COUNTY...

MORETOWN	11.0	718 AM	3/17	PUBLIC
WAITSFIELD	11.0	810 AM	3/17	COOP
WATERBURY CENTER	11.0	727 AM	3/17	SPOTTER
NORTHFIELD	10.2	245 PM	3/17	NWS EMPLOYEE
WAITSFIELD	10.0	634 AM	3/17	PUBLIC
MARSHFIELD	9.0	854 AM	3/17	SPOTTER
MONTPELIER	9.0	947 AM	3/17	COOP
NORTHFIELD	9.0	811 AM	3/17	COOP
PLAINFIELD	9.0	924 AM	3/17	COOP
WORCESTER	8.2	829 AM	3/17	COOP
NORTH CALAIS	8.0	1009 AM	3/17	SPOTTER

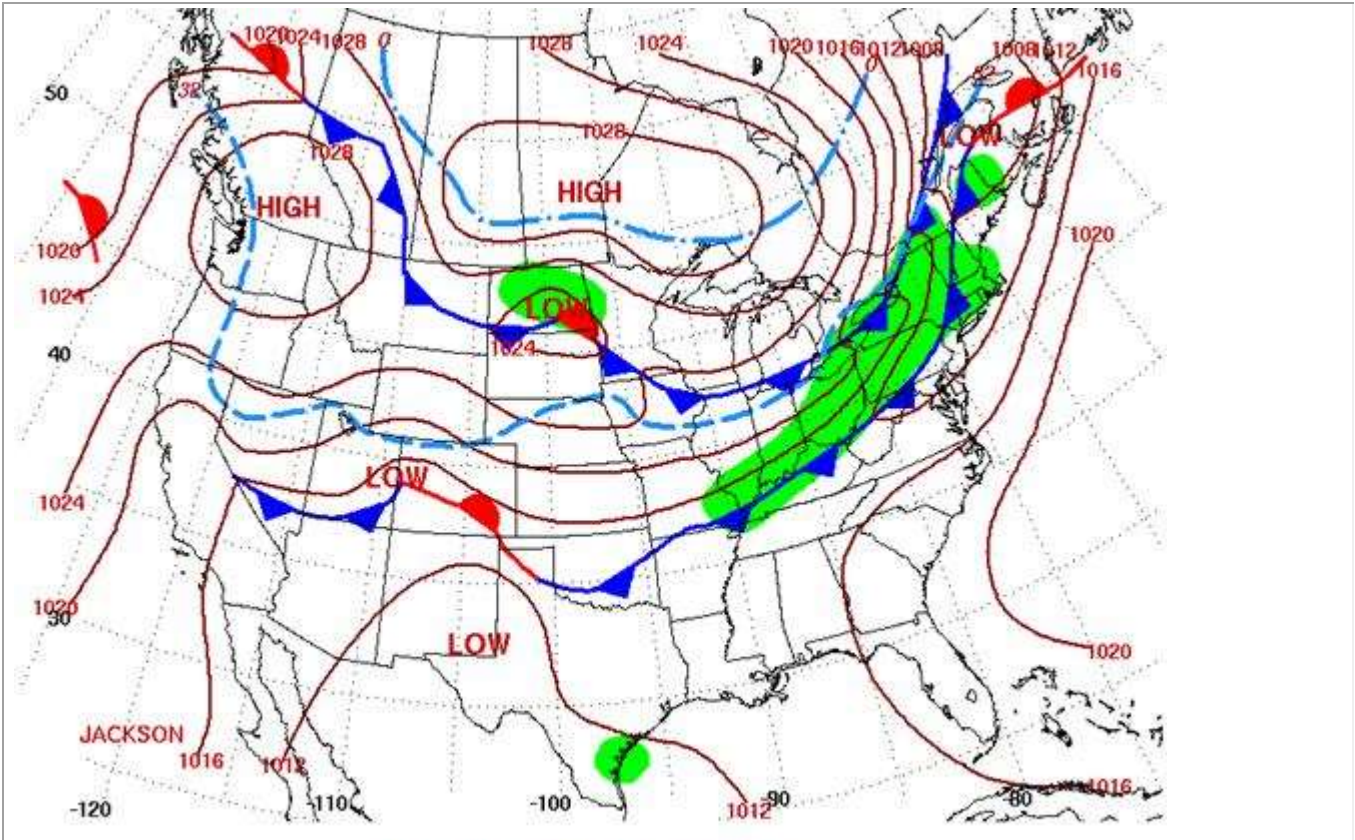
...WINDSOR COUNTY...

SPRINGFIELD	14.5	508 AM	3/17	SPOTTER
CHESTER	12.0	1125 AM	3/17	SPOTTER
HARTLAND	12.0	921 AM	3/17	SPOTTER
BETHEL	11.5	636 AM	3/17	SPOTTER
ROCHESTER	11.5	753 AM	3/17	COOP
SOUTH WOODSTOCK	10.0	826 AM	3/17	COOP
NORWICH	9.0	1041 AM	3/17	PUBLIC
WHITE RIVER JUNCTION	9.0	1123 AM	3/17	SPOTTER
ANDOVER	8.0	820 AM	3/17	HAM RADIO

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[Back to Text](#)

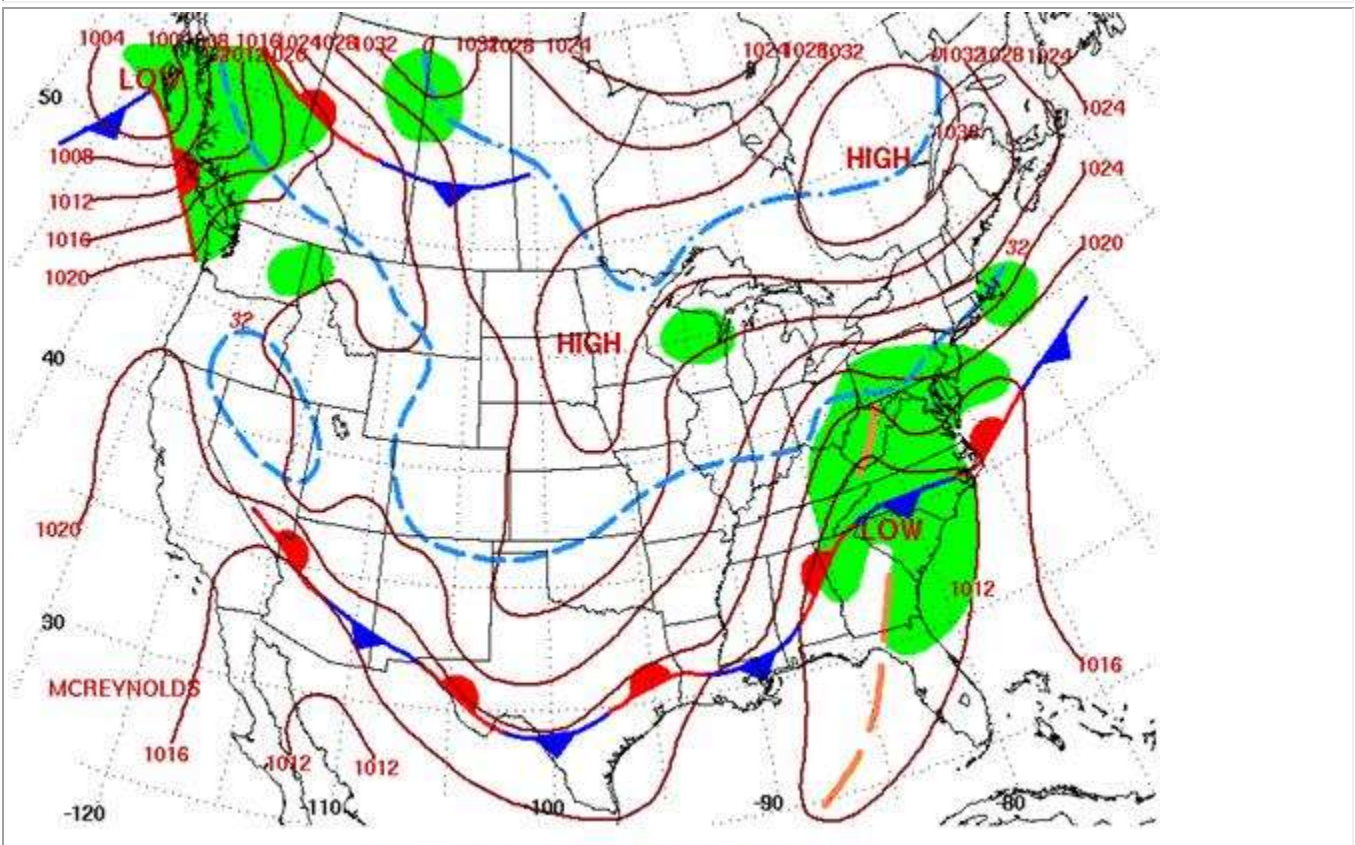
Surface Maps for Thursday (15th), Friday (16th) and Saturday (17th) Mornings



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

US Surface Chart, Thursday Morning (3/15/2007), 1200UTC (8am EDT)

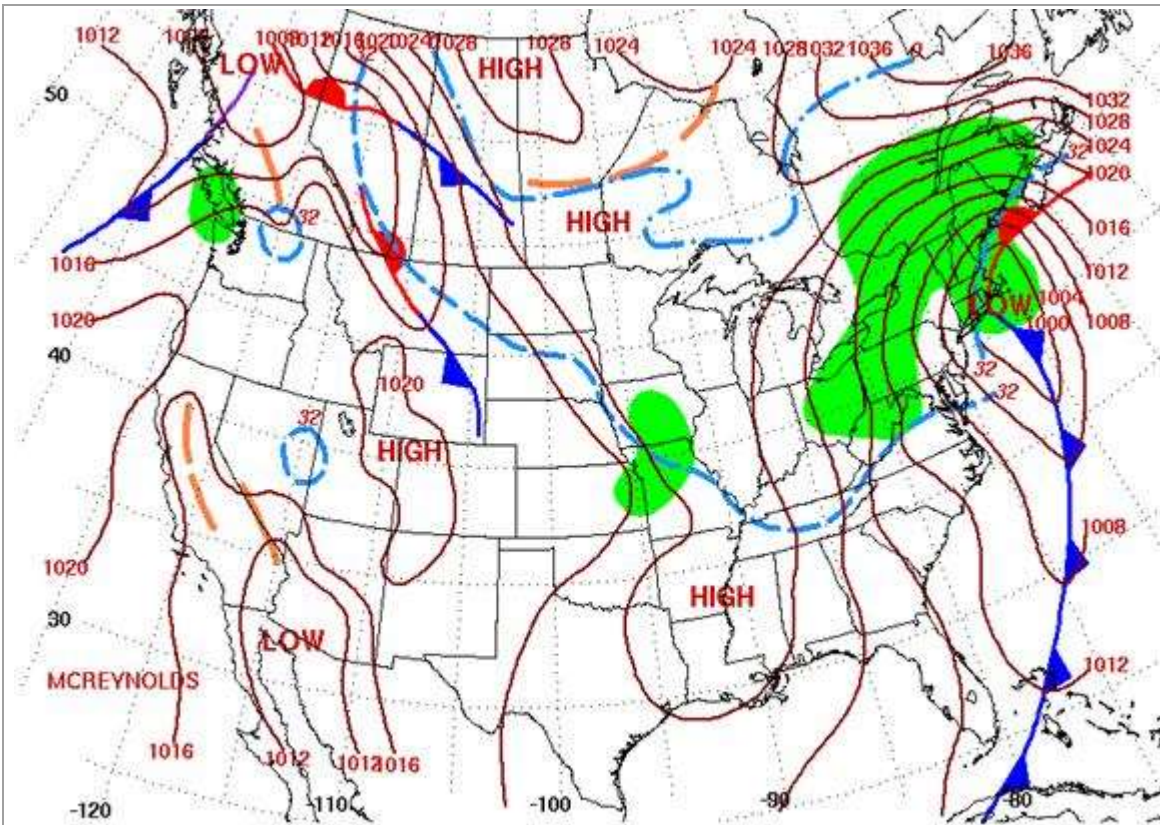
[Back to Text](#)



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

US Surface Chart, Friday Morning (3/16/2007), 1200UTC (8am EDT)

[Back to Text](#)

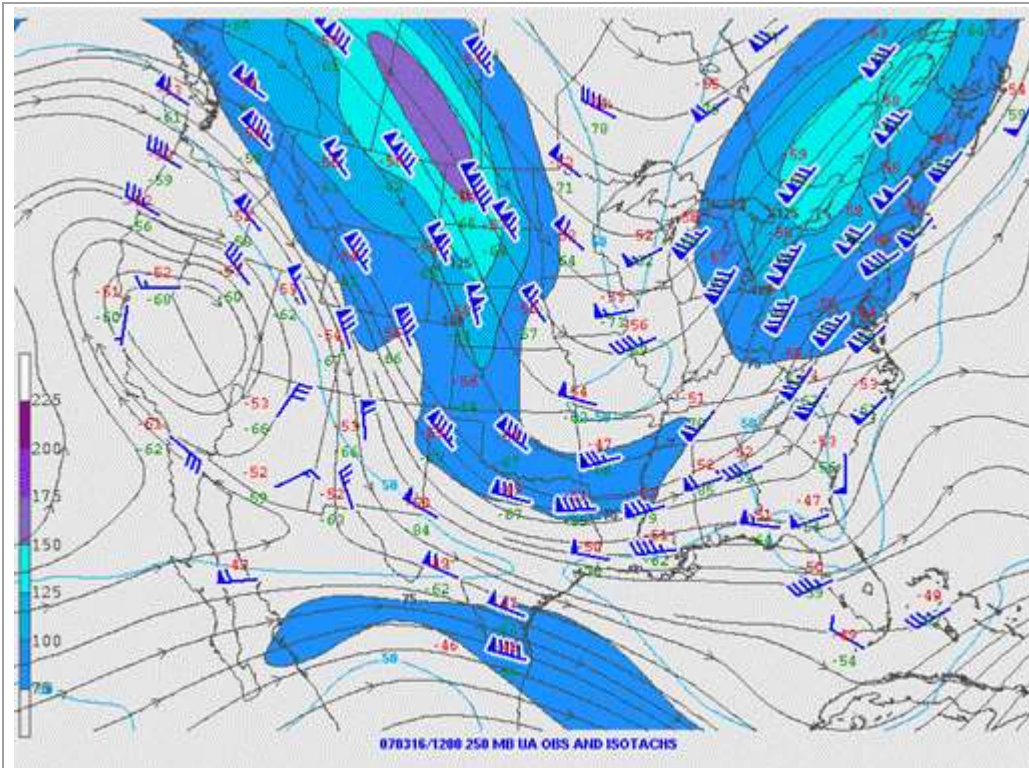


Surface Weather Map at 7:00 A.M. E.S.T.

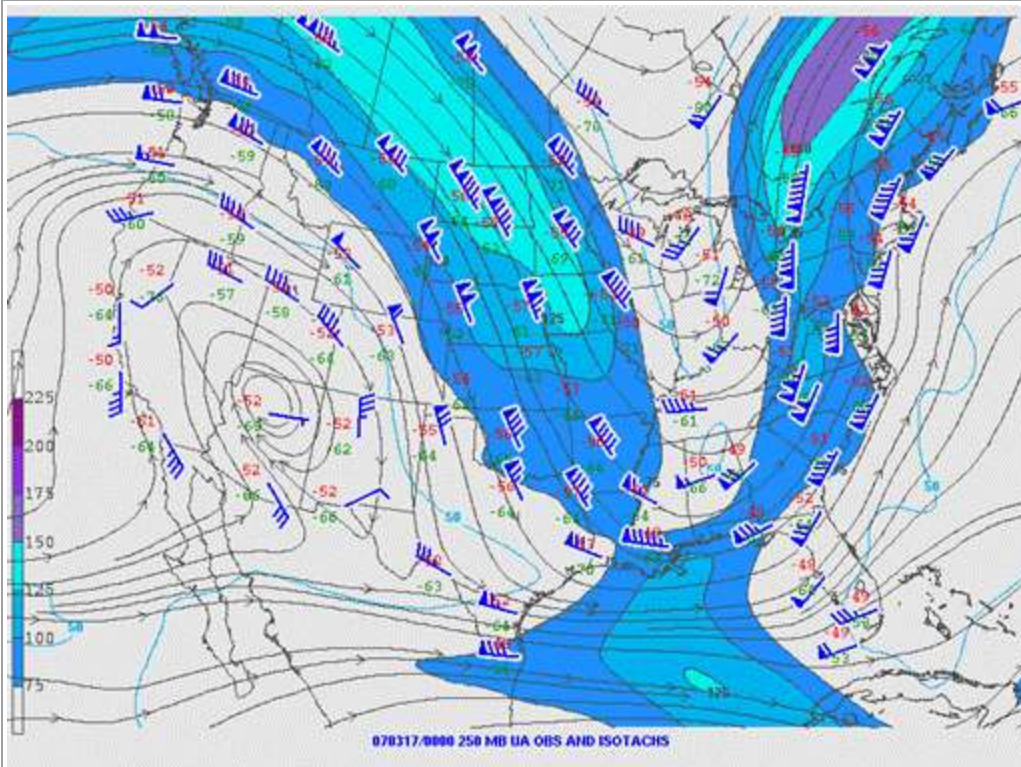
US Surface Chart, Saturday Morning (3/17/2007), 1200UTC (8am EDT)

[Back to Text](#)

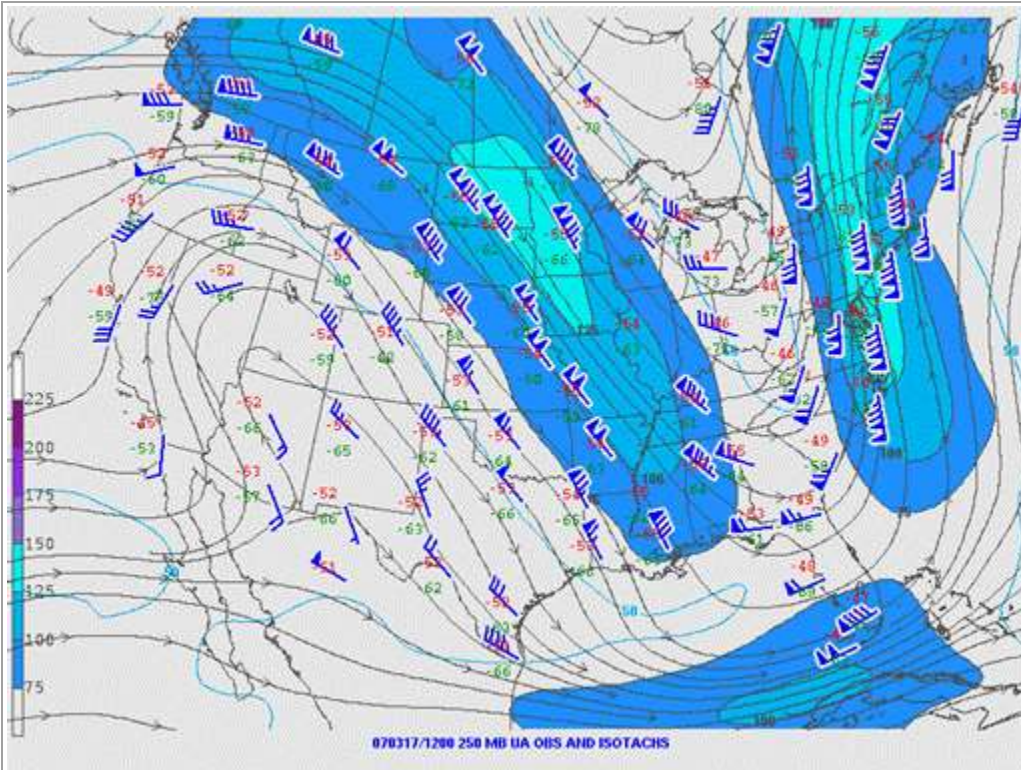
Upper Air Charts showing Deepening and Sharpening Coupled Upper Jet Friday Morning (16th) through Saturday Morning (17th)



US Upper Air Chart (250HPa), Friday Morning (3/16/2007), 1200UTC (8am EDT)



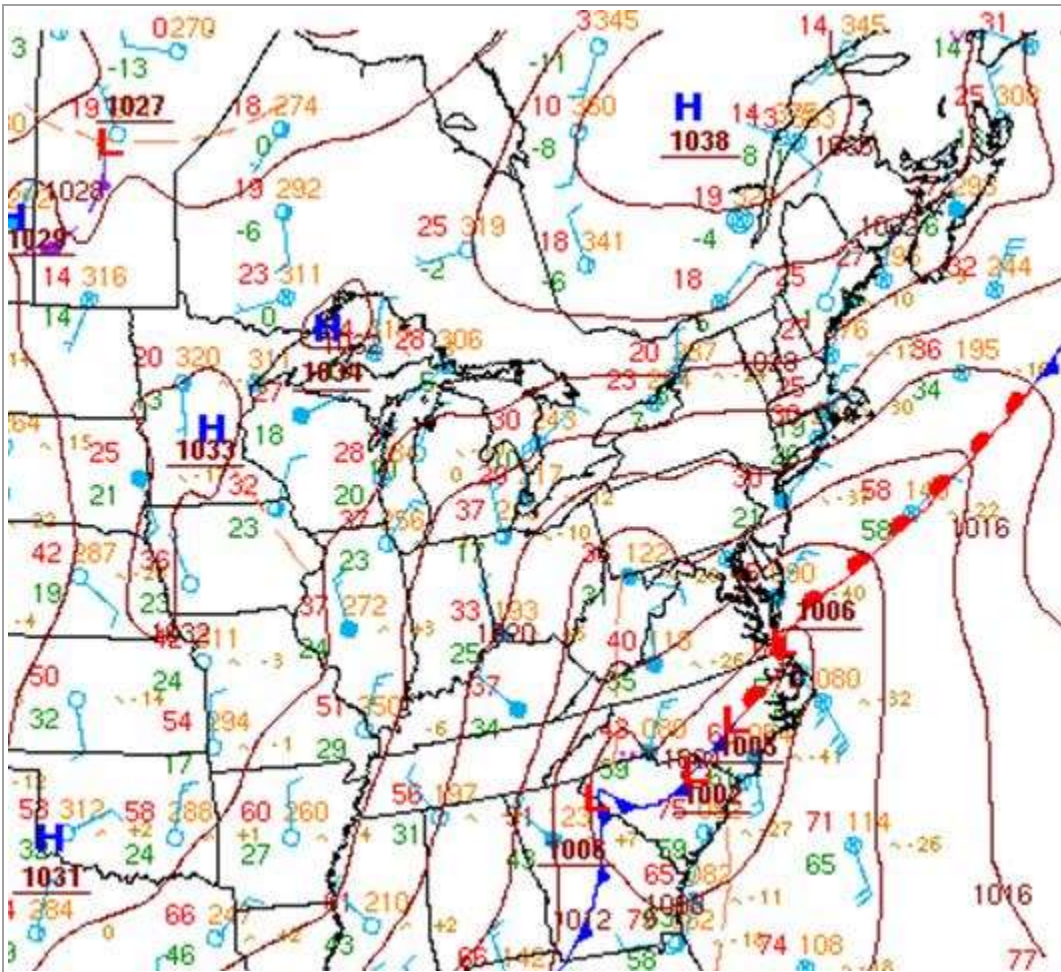
US Upper Air Chart (250HPa), Friday Evening (3/17/2007), 0000UTC (8pm EDT - 3/16/2007)



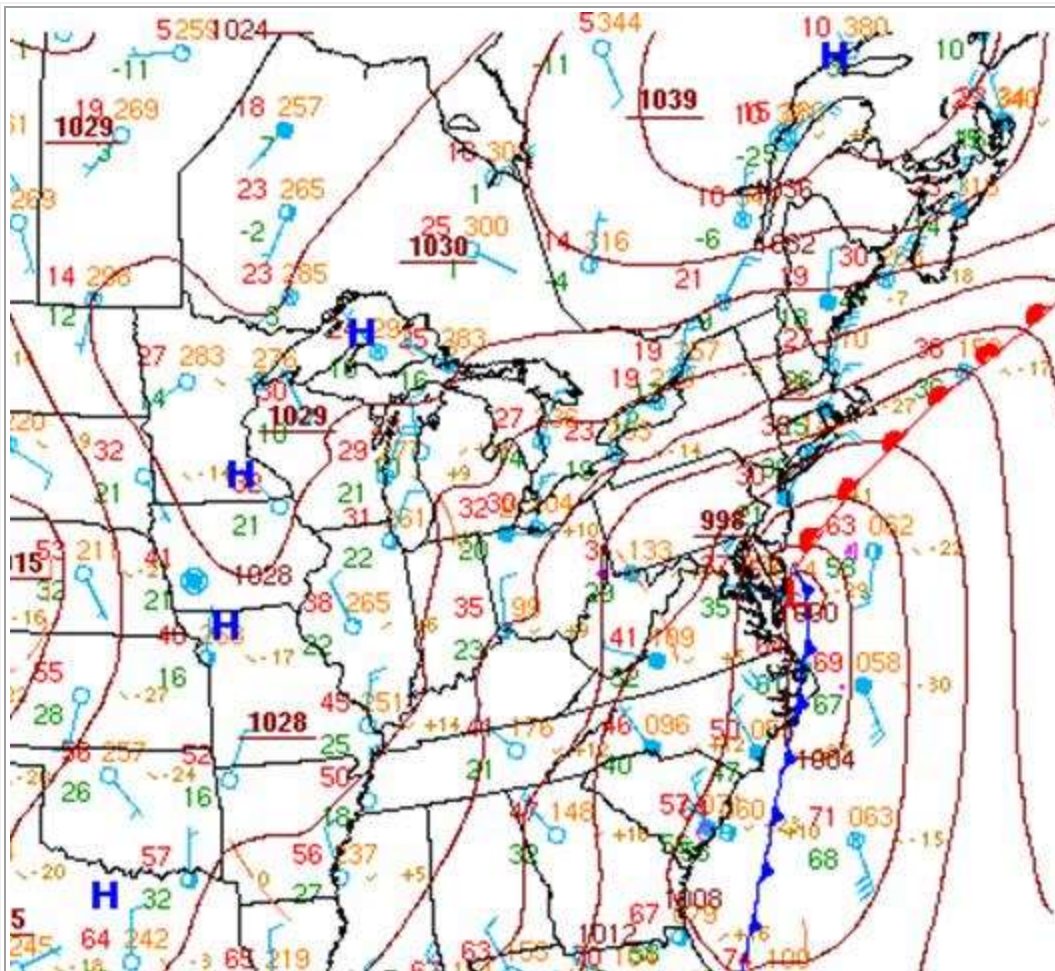
US Upper Air Chart (250HPa), Saturday Morning (3/17/2007), 1200UTC (8am EDT)

[Back to Text](#)

Surface Low Track along the Eastern Seaboard Friday Afternoon into Saturday

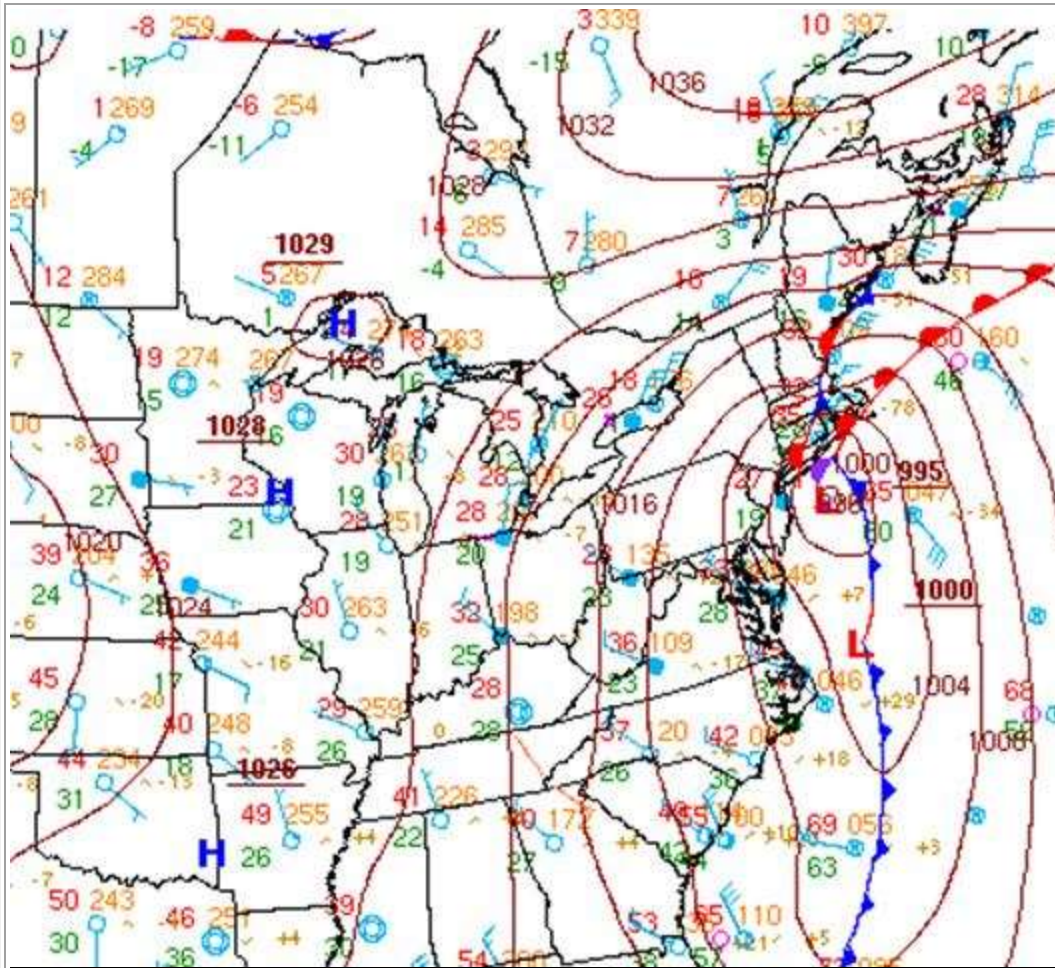


Surface Chart, Friday Afternoon (3/16/2007), 1800UTC (2pm EDT)

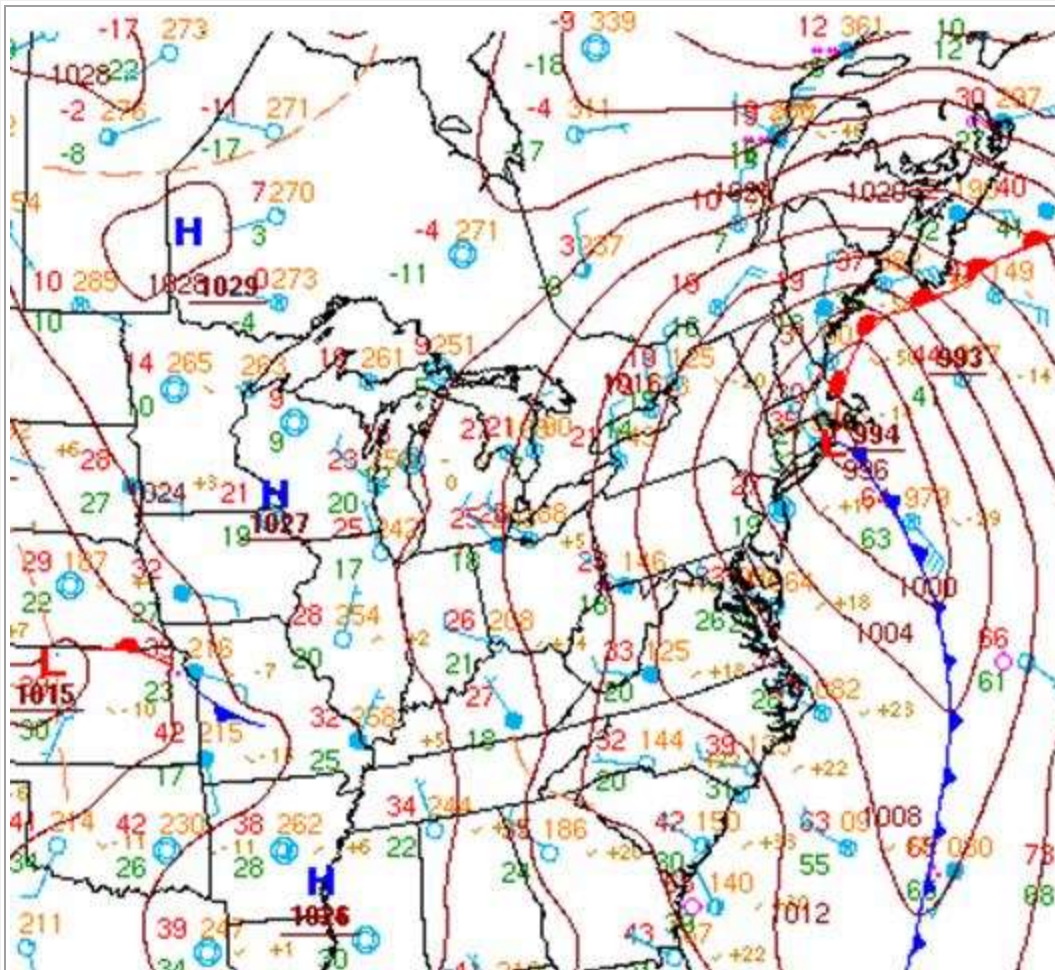


Surface Chart, Friday Evening, 0000UTC 3/17/2007 (8pm EDT - 3/16/2007)

[Back to Text](#)



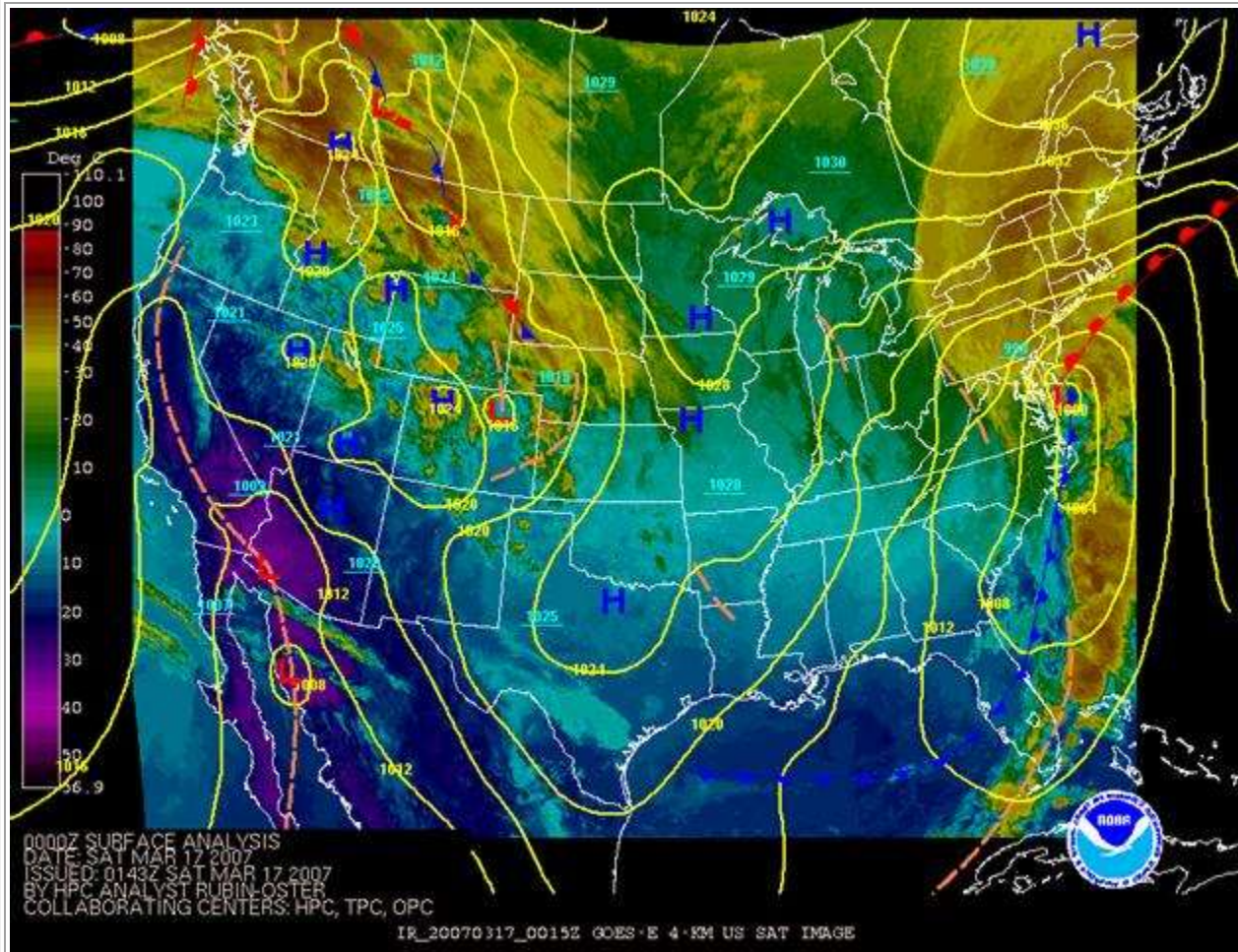
Surface Chart, Saturday Morning (3/17/2007), 0600UTC (2am EDT)



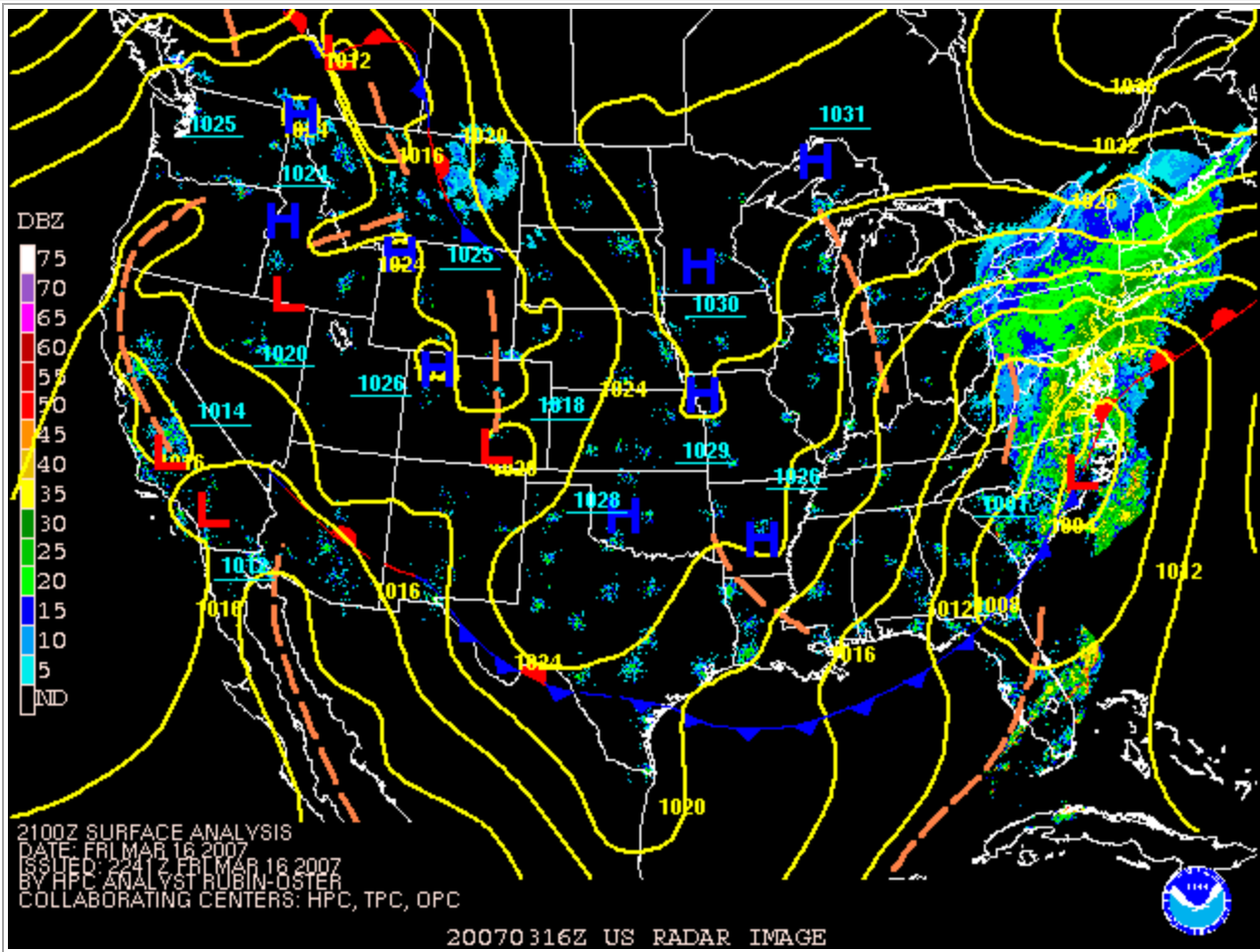
Surface Chart, Saturday Morning (3/17/2007), 1200UTC (8am EDT)

[Back to Text](#)

Satellite and Radar on Friday Evening (16th)



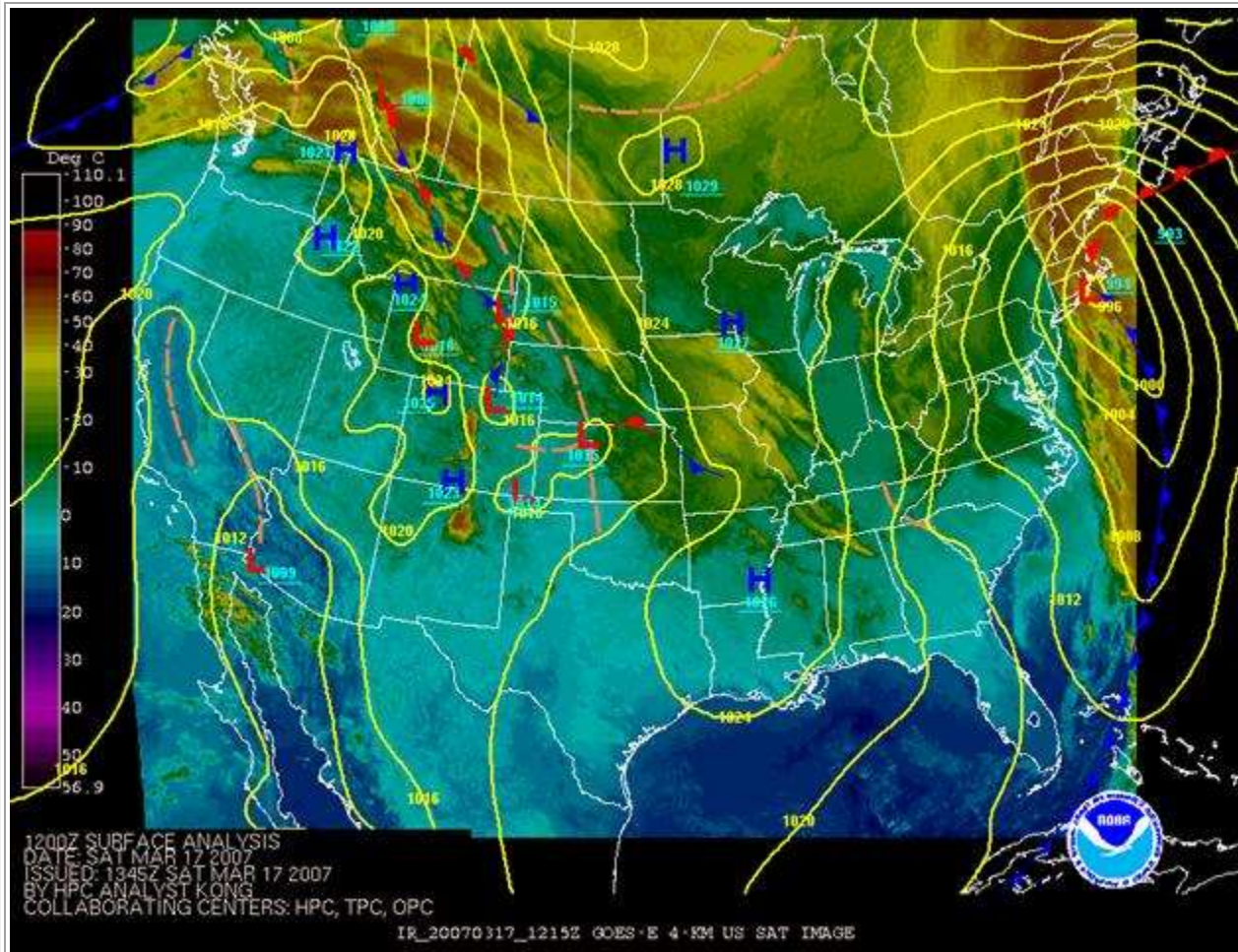
Infra-red Satellite and Surface Chart, Friday Evening, 0000UTC 3/17/2007 (8pm EDT - 3/16/2007)



Composite Radar and Surface Chart, Friday Evening, 0000UTC 3/17/2007 (8pm EDT - 3/16/2007)
[to Text](#)

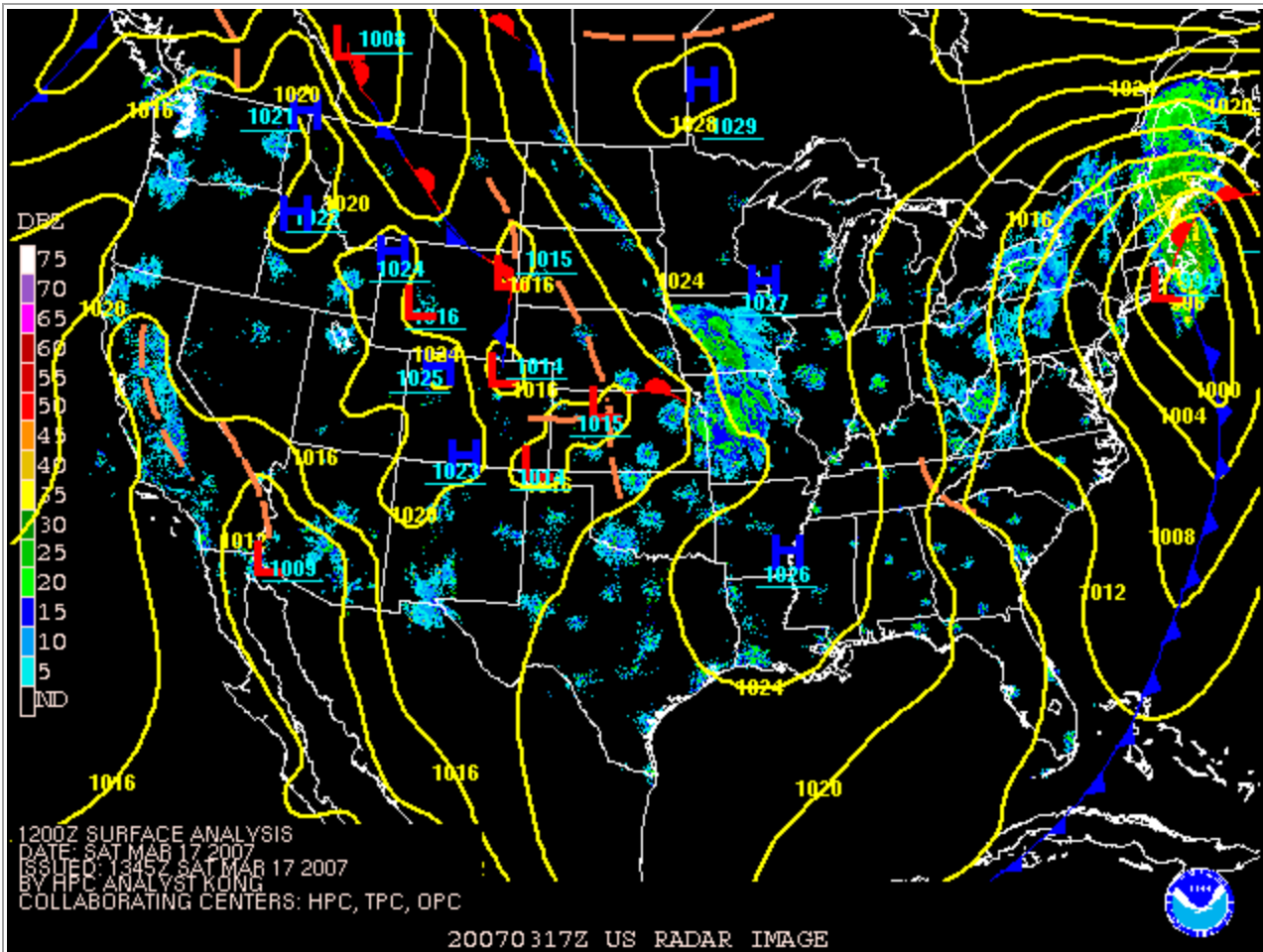
[Back](#)

Satellite and Radar on Saturday Morning (17th)



Infra-red Satellite and Surface Chart, Saturday Morning (3/17/2007), 1200UTC (8am EDT)

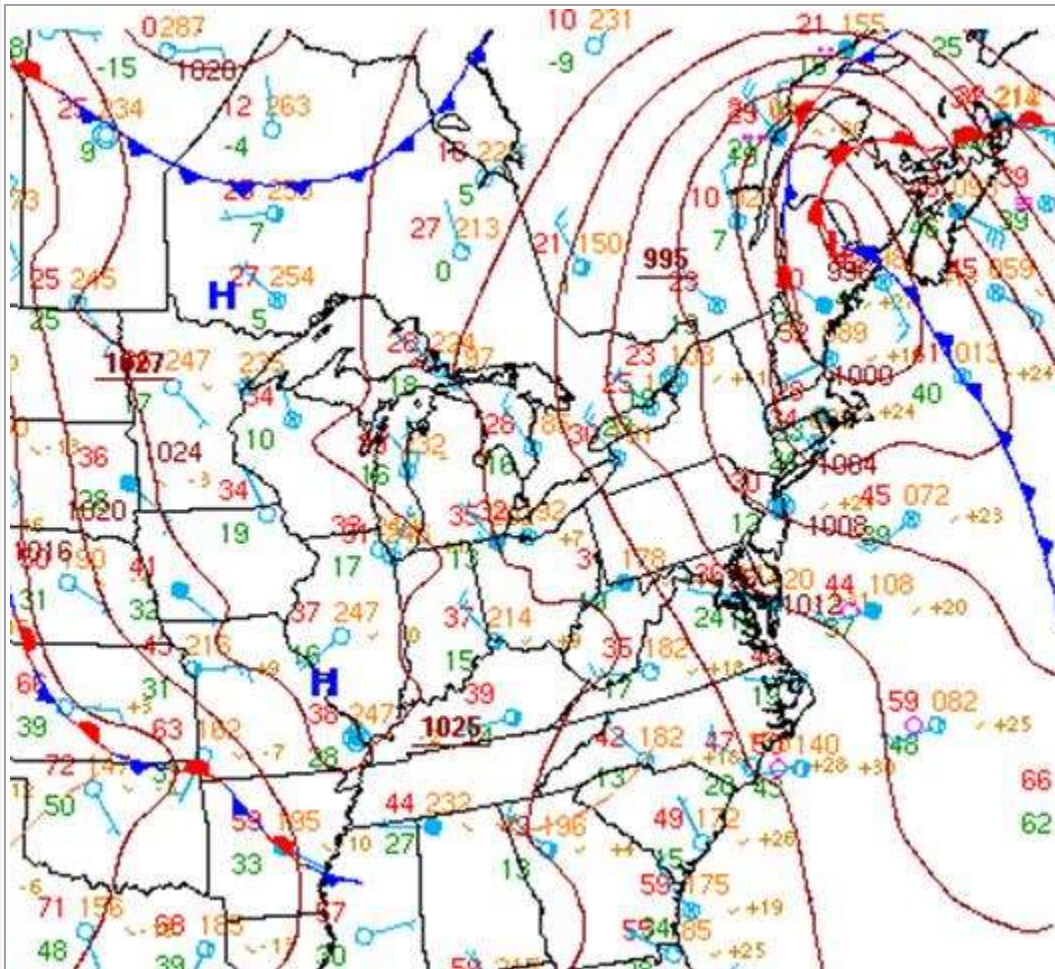
[Back to Text](#)



Composite Radar and Surface Chart, Saturday Morning (3/17/2007), 1200UTC (8am EDT)

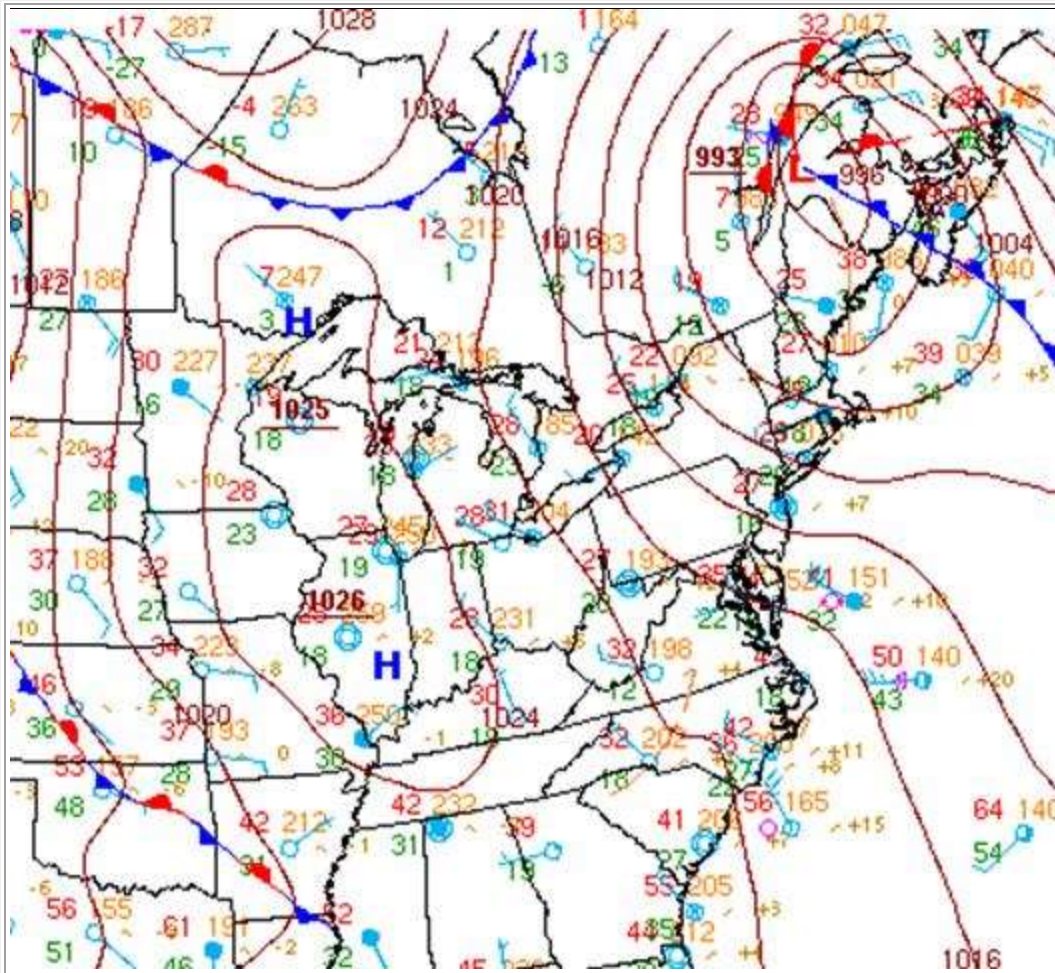
[Back to Text](#)

Surface Maps and Satellite for Saturday Night (17th) and Early Sunday Morning (18th)



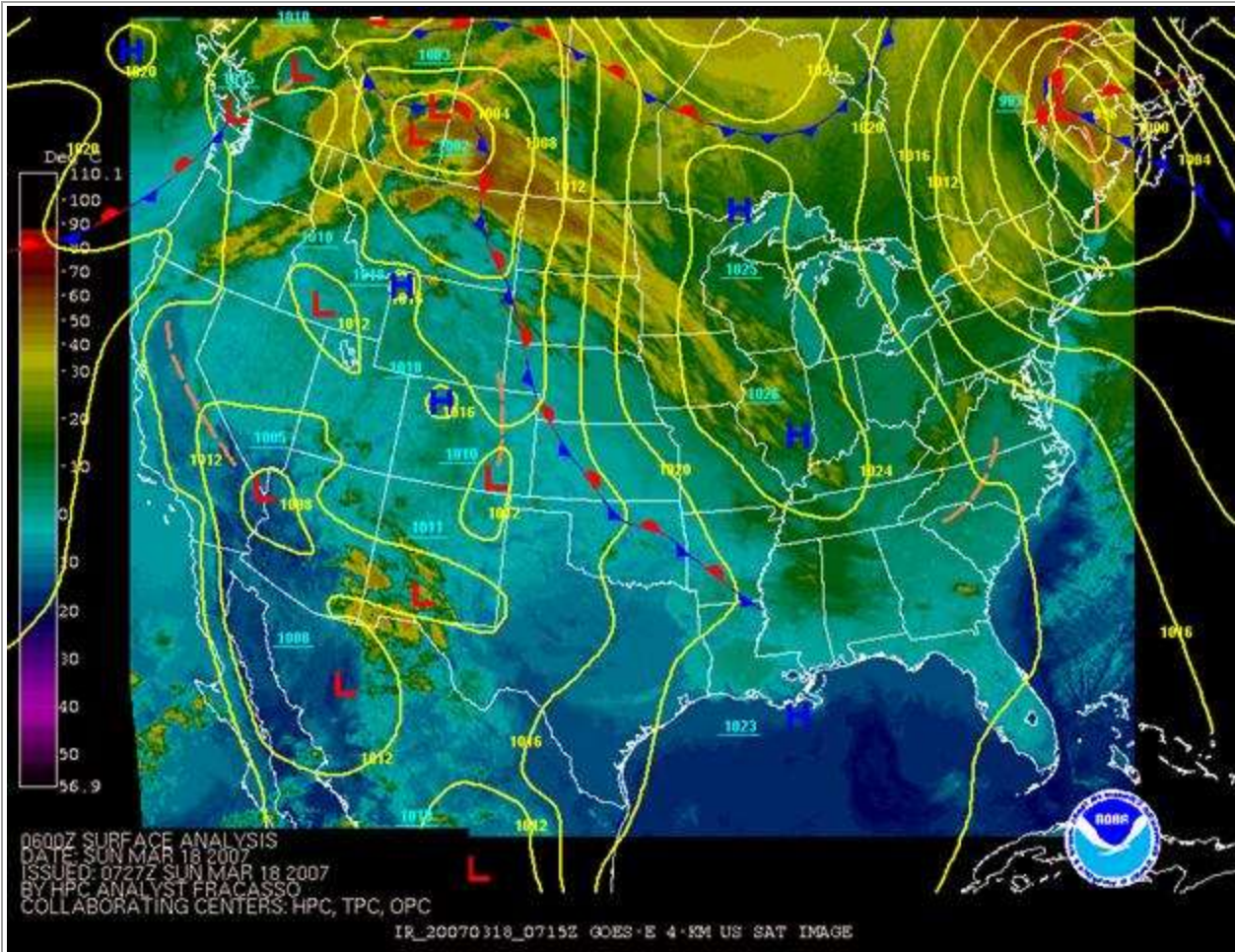
Surface Chart, Saturday Evening, 0000UTC 3/18/2007 (8pm EDT - 3/17/2007)

[Back to Text](#)



Surface Chart, Early Sunday Morning (3/18/2007), 0600UTC (2am EDT)

[Back to Text](#)



Infra-red Satellite, Early Sunday Morning (3/18/2007), 0600UTC (2am EDT)

[Back to Text](#)

Snowfall Reports from the Nor'Easter ending Saturday (3/17) and the Wrap-around/Upslope Event of Saturday evening into Sunday (3/18) morning

PUBLIC INFORMATION STATEMENT

SPOTTER REPORTS

NATIONAL WEATHER SERVICE BURLINGTON VT

1014 AM EDT SUN MAR 18 2007

THE FOLLOWING ARE UNOFFICIAL OBSERVATIONS TAKEN OVER THE PAST 36 HOURS WHICH INCLUDES SNOWFALL FROM THE ST PATRICKS DAY NOR'EASTER AND FROM UPSLOPE SNOW WHICH OCCURRED LAST NIGHT INTO THIS MORNING. 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...			
ELLENBURG DEPOT	20.0	700 AM 3/18	COOP
...ESSEX COUNTY...			
NEWCOMB	10.5	942 AM 3/18	COOP
...FRANKLIN COUNTY...			
TUPPER LAKE	12.0	700 AM 3/18	COOP
MALONE	10.5	700 AM 3/18	COOP
...ST. LAWRENCE COUNTY...			
CANTON	6.5	900 AM 3/18	COOP
VERMONT			
...ADDISON COUNTY...			
SOUTH LINCOLN	18.8	700 AM 3/18	COOP
NEW HAVEN	18.0	630 AM 3/18	COOP
MONKTON	16.0	913 AM 3/18	SPOTTER
...CALEDONIA COUNTY...			
SUTTON	13.0	730 AM 3/18	COOP
...CHITTENDEN COUNTY...			
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...ESSEX COUNTY...			
CANAAN	12.5	800 AM 3/18	COOP
ISLAND POND	12.0	900 AM 3/18	COOP
...FRANKLIN COUNTY...			
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SAINT ALBANS	12.2	927 AM 3/18	COOP

...LAMOILLE COUNTY...					
JEFFERSONVILLE	15.4	855 AM	3/18	COOP	
PLEASANT VALLEY	15.3	100 AM	3/18	SPOTTER	
EDEN	14.7	700 AM	3/18	COOP	
MORRISVILLE	11.5	700 AM	3/18	COOP	
...ORANGE COUNTY...					
CORINTH	13.5	710 AM	3/18	SPOTTER	
BROOKFIELD	12.0	800 AM	3/18	COOP	
CHELSEA	11.2	700 AM	3/18	COOP	
...ORLEANS COUNTY...					
NEWPORT	14.3	700 AM	3/18	COOP	
EAST ALBANY	11.3	700 AM	3/18	COOP	
...RUTLAND COUNTY...					
RUTLAND	12.9	700 AM	3/18	COOP	
DANBY FOUR CORNERS	10.8	944 AM	3/18	COOP	
...WASHINGTON COUNTY...					
WAITSFIELD	16.0	800 AM	3/18	COOP	
NORTHFIELD	11.5	950 AM	3/18	COOP	
MARSHFIELD	11.0	855 AM	3/18	SPOTTER	
WORCESTER	10.7	700 AM	3/18	COOP	
PLAINFIELD	9.9	944 AM	3/18	COOP	
...WINDSOR COUNTY...					
BETHEL	12.0	700 AM	3/18	COOP	

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[Back to Text](#)