Flight Day Conditions

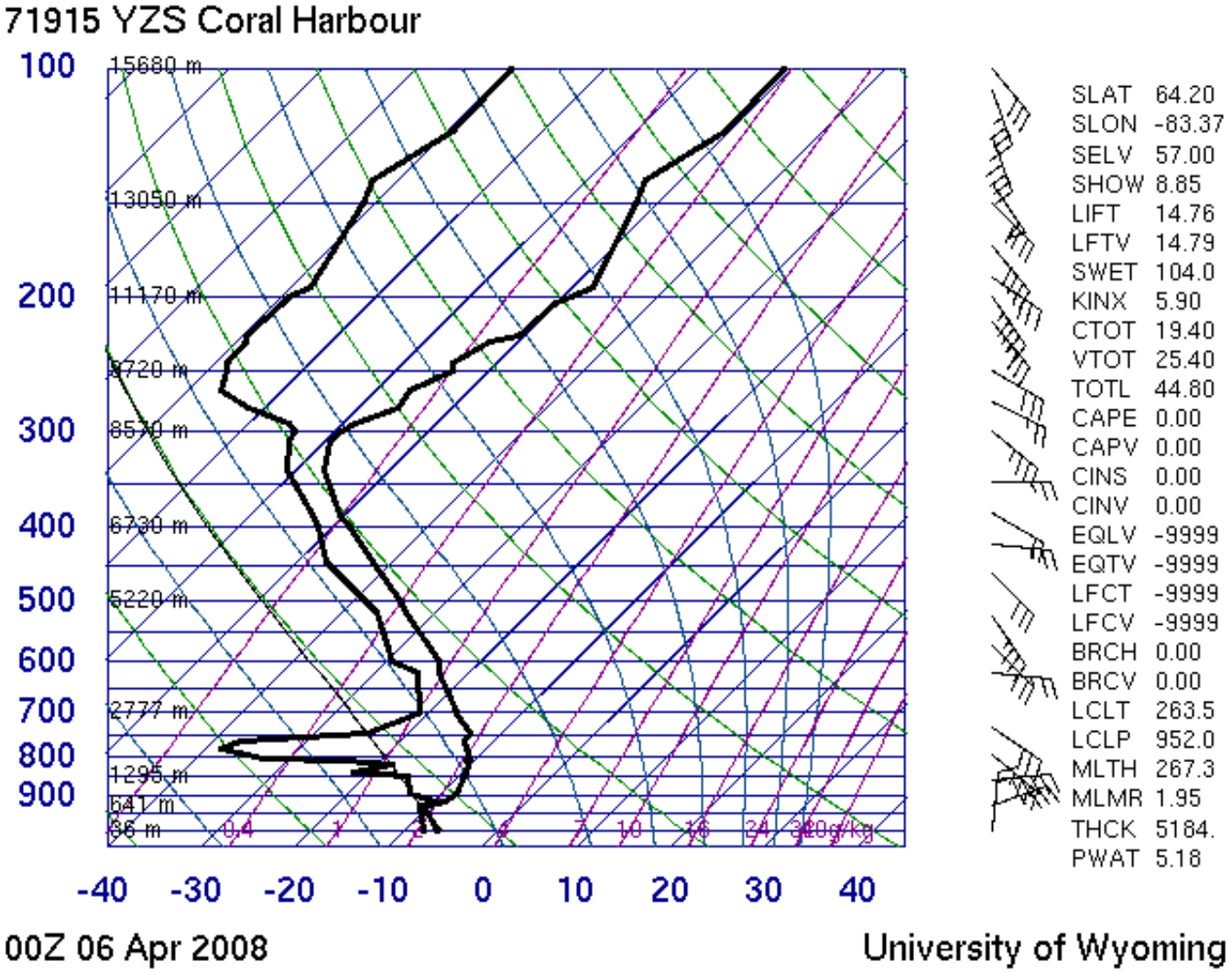
April 8-9, 2008

Henry Fuelberg
Andy Latto

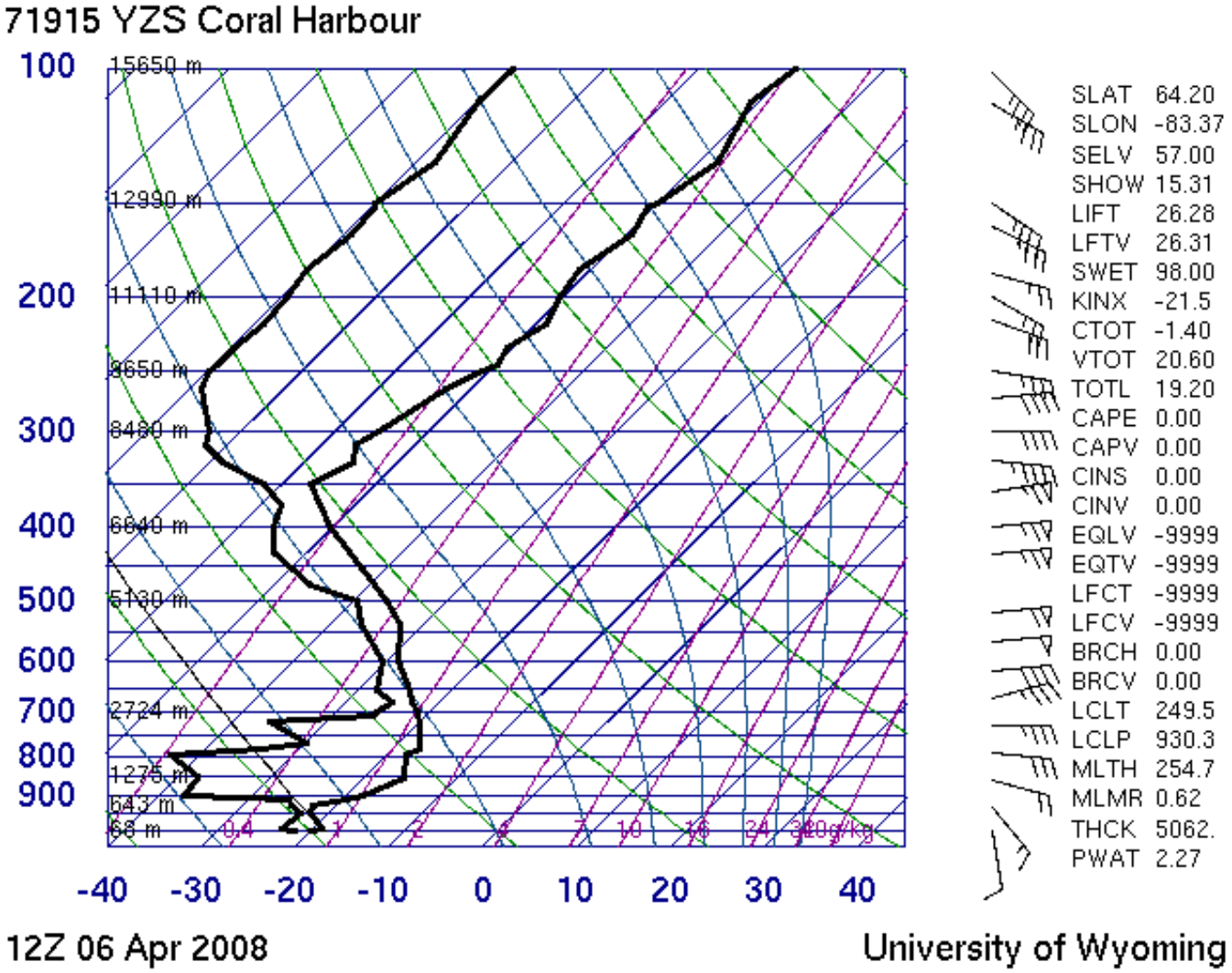
“Your Eyes to the Skies”

Coral Harbour Soundings

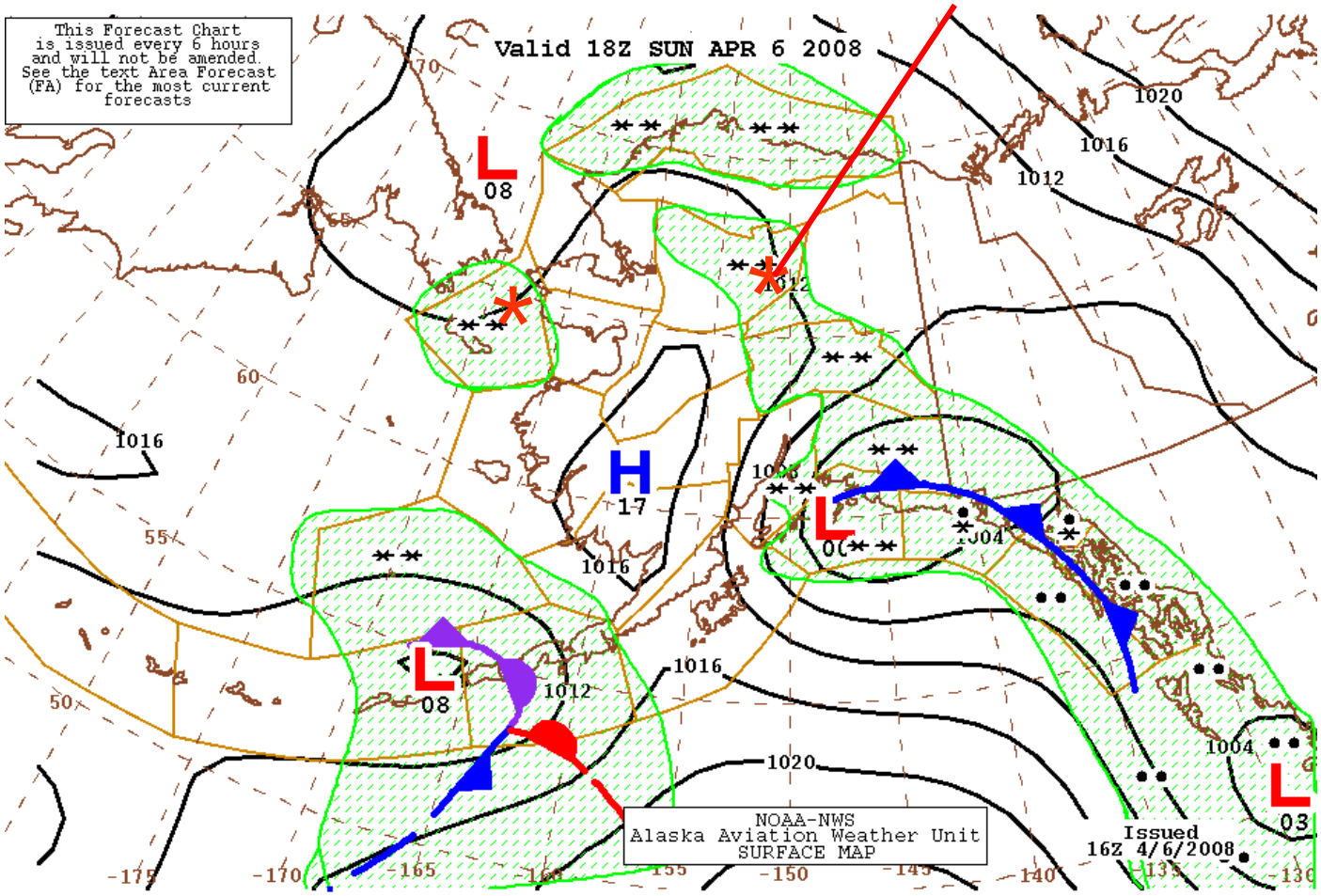
Coral Harbour Soundings
7PM CDT April 5th



Coral Harbour Soundings
7AM CDT April 6th

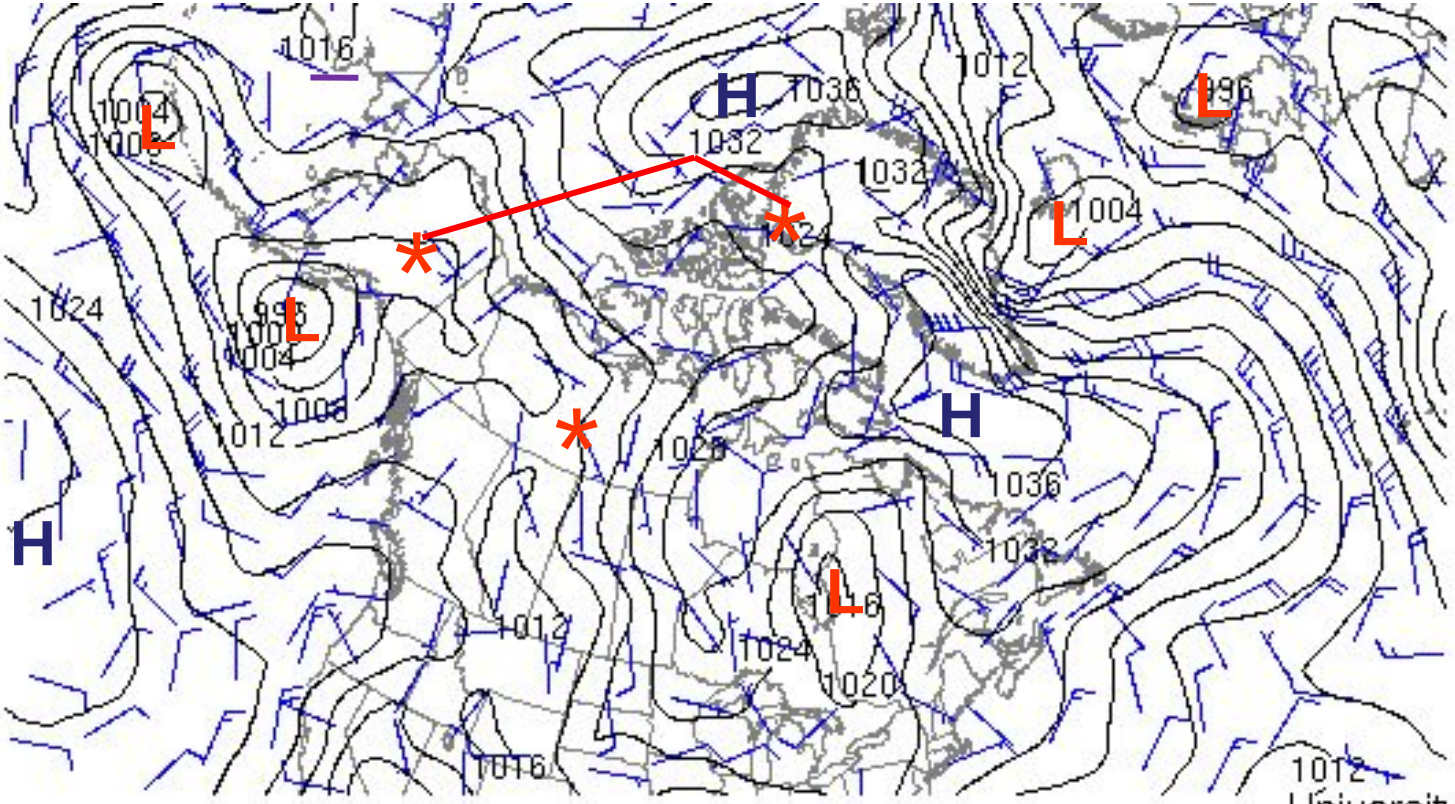


Current Surface Analysis



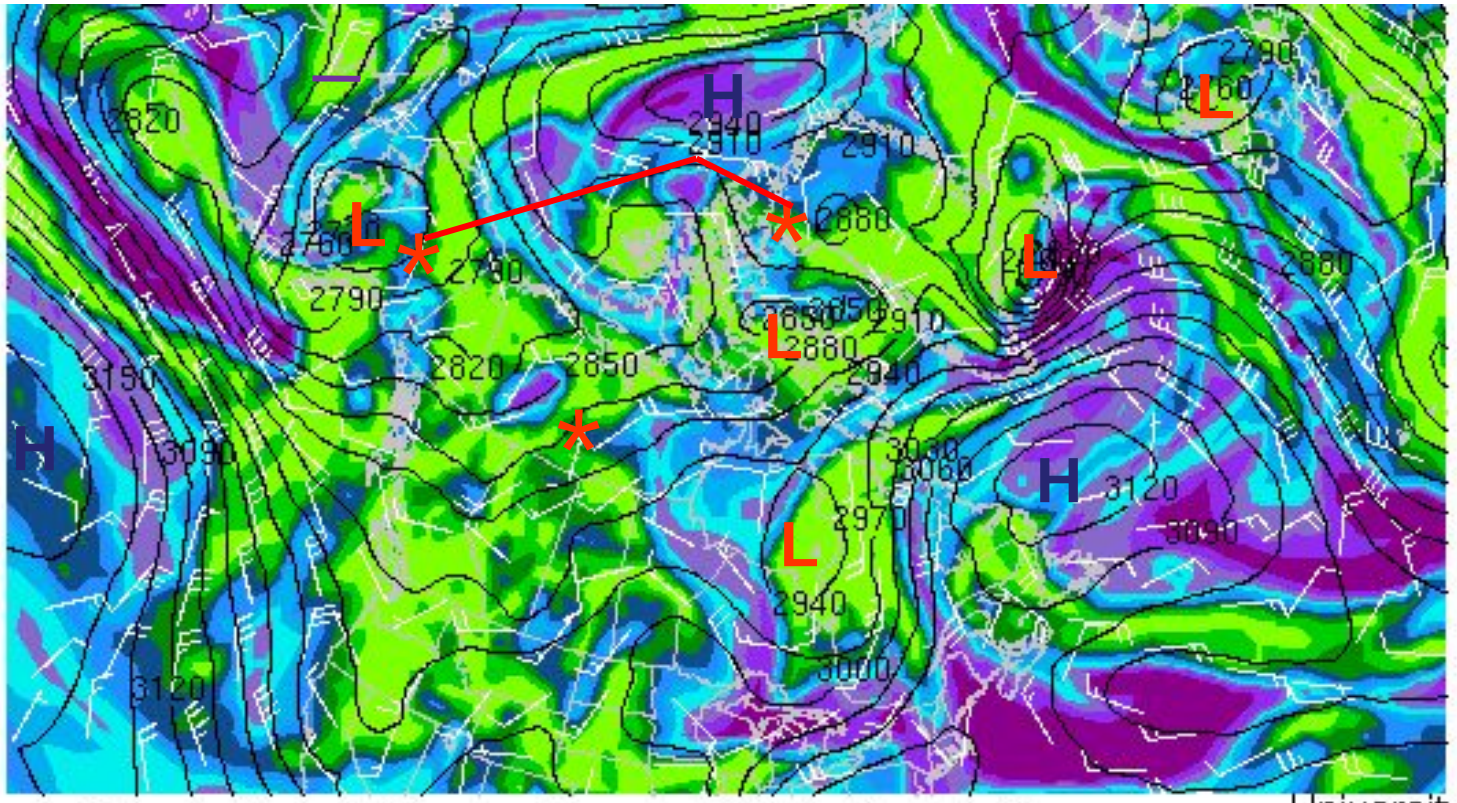
Tuesday’s Forecast

GFS Forecast Valid 1800Z April 8
SLP and Winds



60 Hour Surface Forecast Valid 18Z Tue 08 Apr 2008

GFS Forecast Valid 1800Z April 8
700 hPa Relative Humidity and Heights



10 20 30 40 50 60 70 80 90

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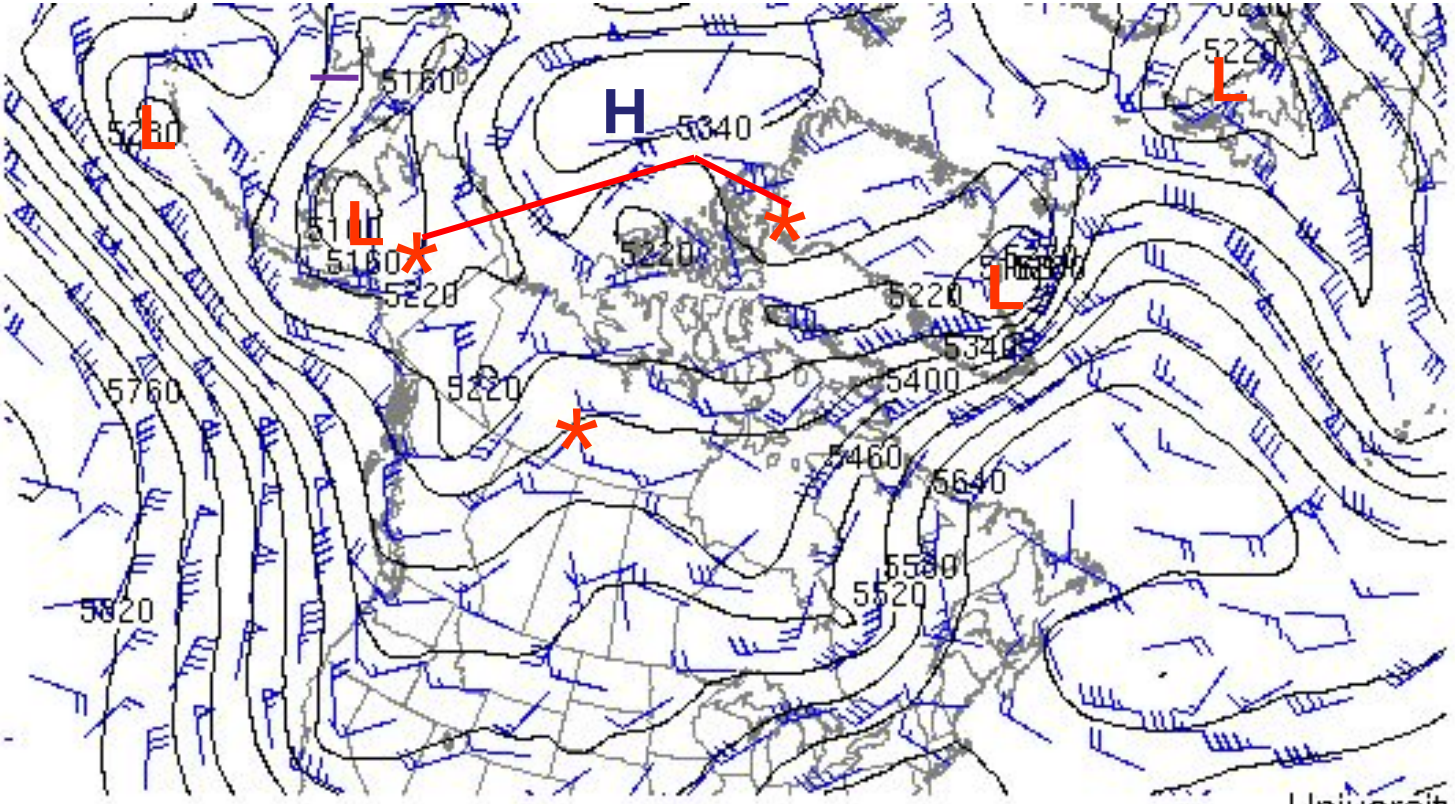
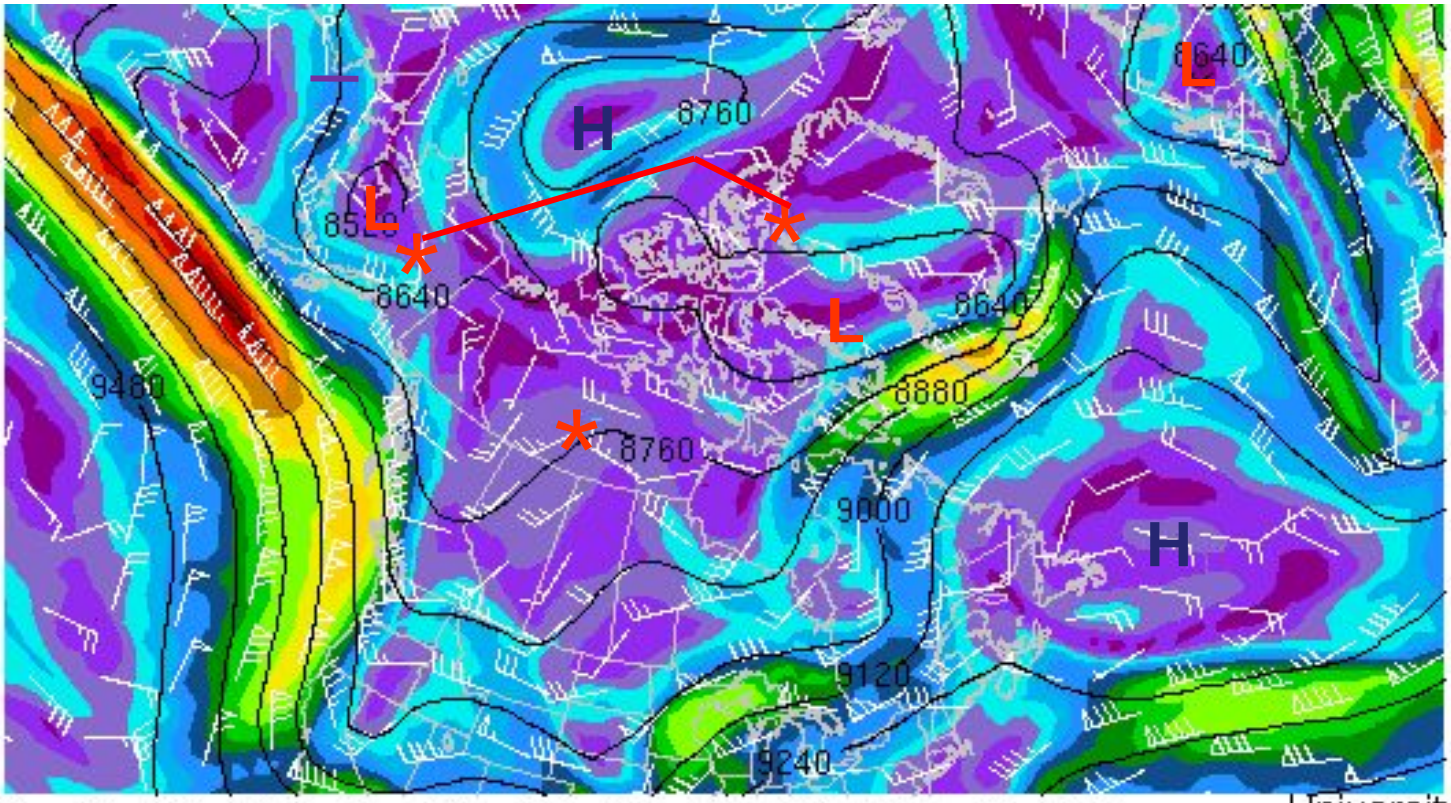
60 Hour 700 hPa Forecast Valid 18Z Tue 08 Apr 2008

GFS Forecast Valid 1800Z April 8
500 hPa heights, vorticity, and winds



60 Hour 500 hPa Forecast Valid 18Z Tue 08 Apr 2008

GFS Forecast Valid 1800Z April 8
300 hPa winds and heights



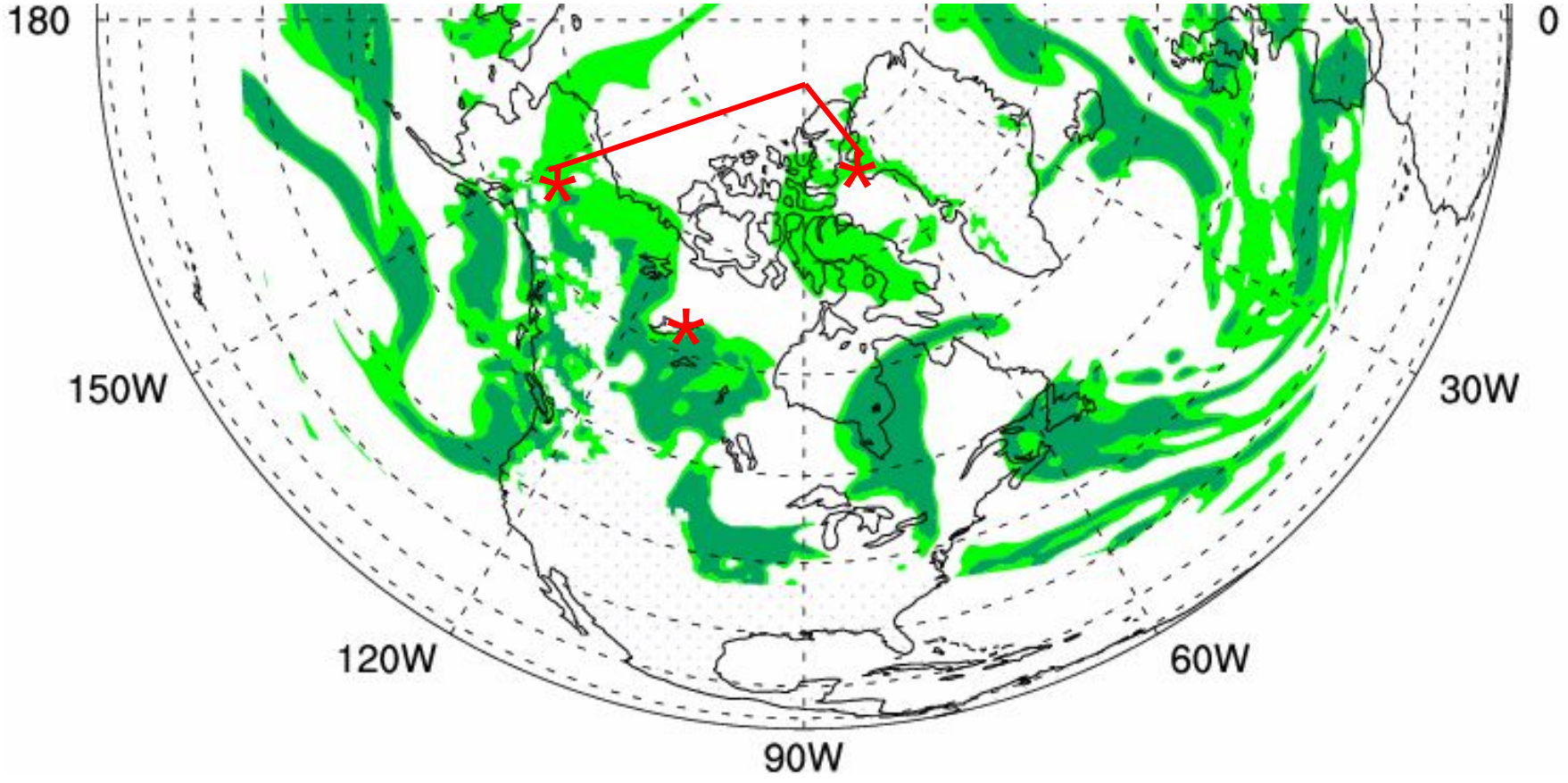
20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

University of Wyoming

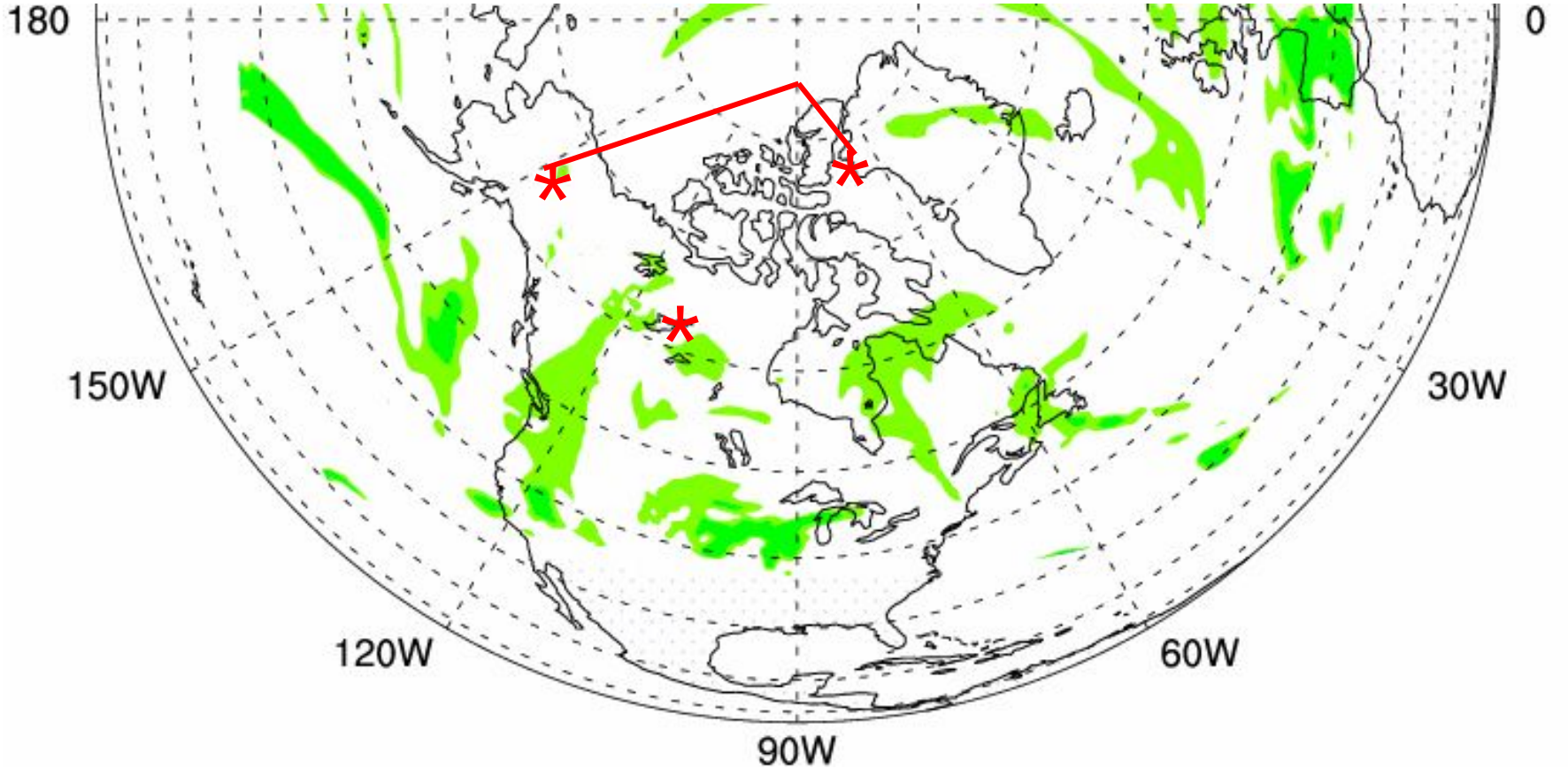
60 Hour 300 hPa Forecast Valid 18Z Tue 08 Apr 2008

What About Clouds for Tuesday??

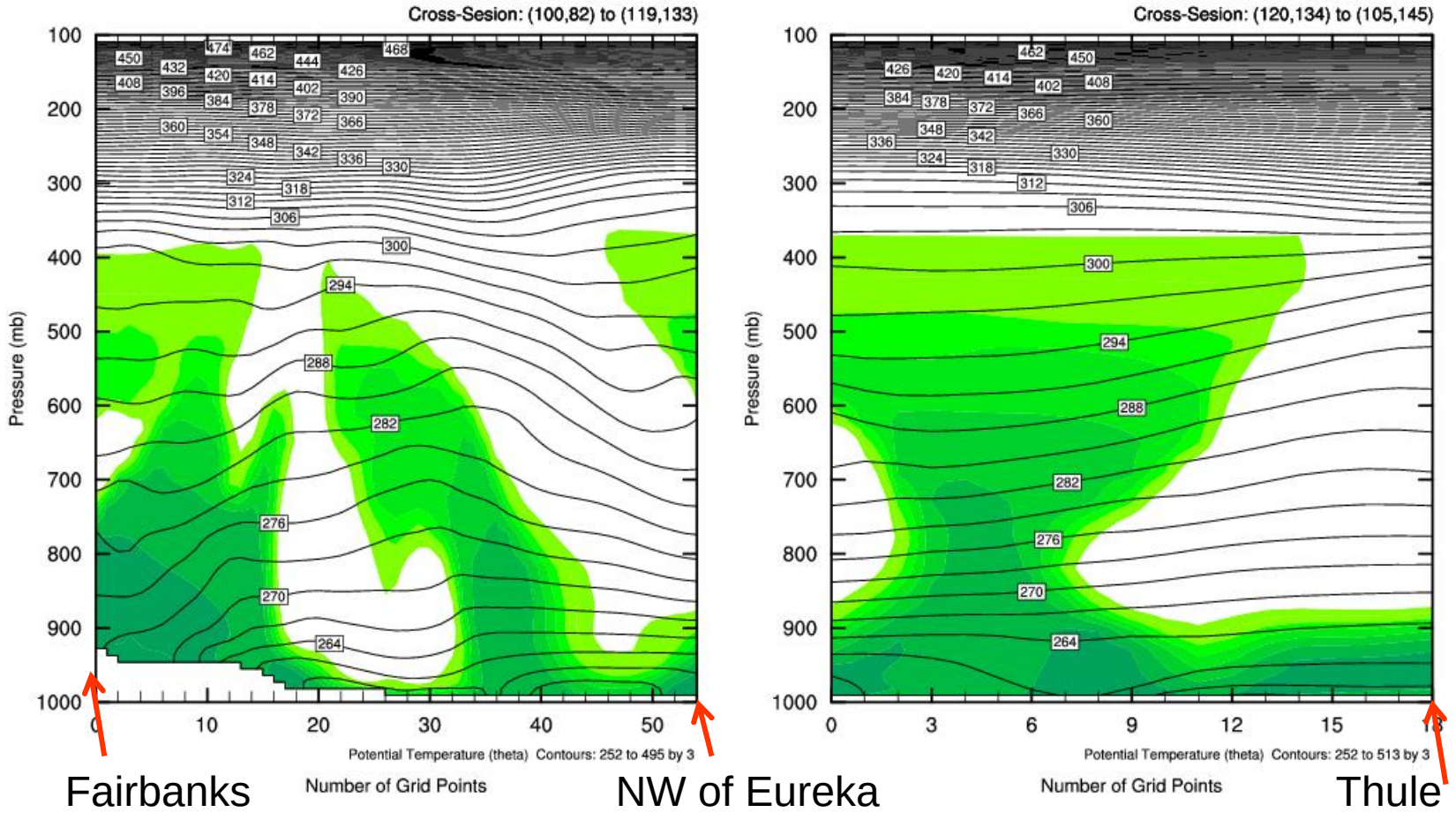
FSU WRF Relative Humidity at 850 hPa Forecast
Valid 1800 Z April 8



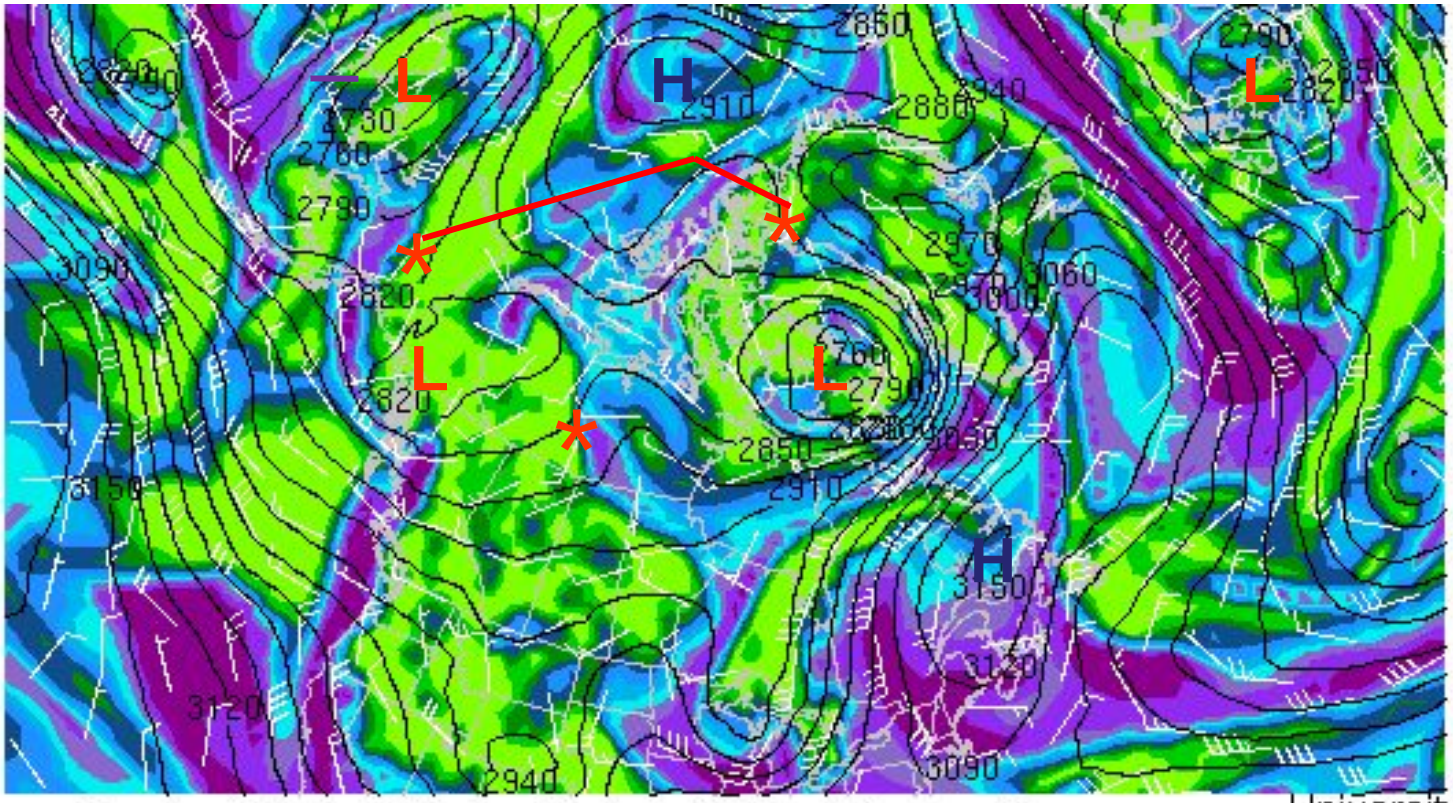
FSU WRF Relative Humidity at 500 hPa Forecast
Valid 1800 Z April 8



FSU WRF RH Cross Section DC-8 Flight Path Forecast for Suitcase Flight Valid 1800 Z April 8



GFS Forecast Valid 1800Z April 8
700 hPa Relative Humidity and Heights



10 20 30 40 50 60 70 80 90

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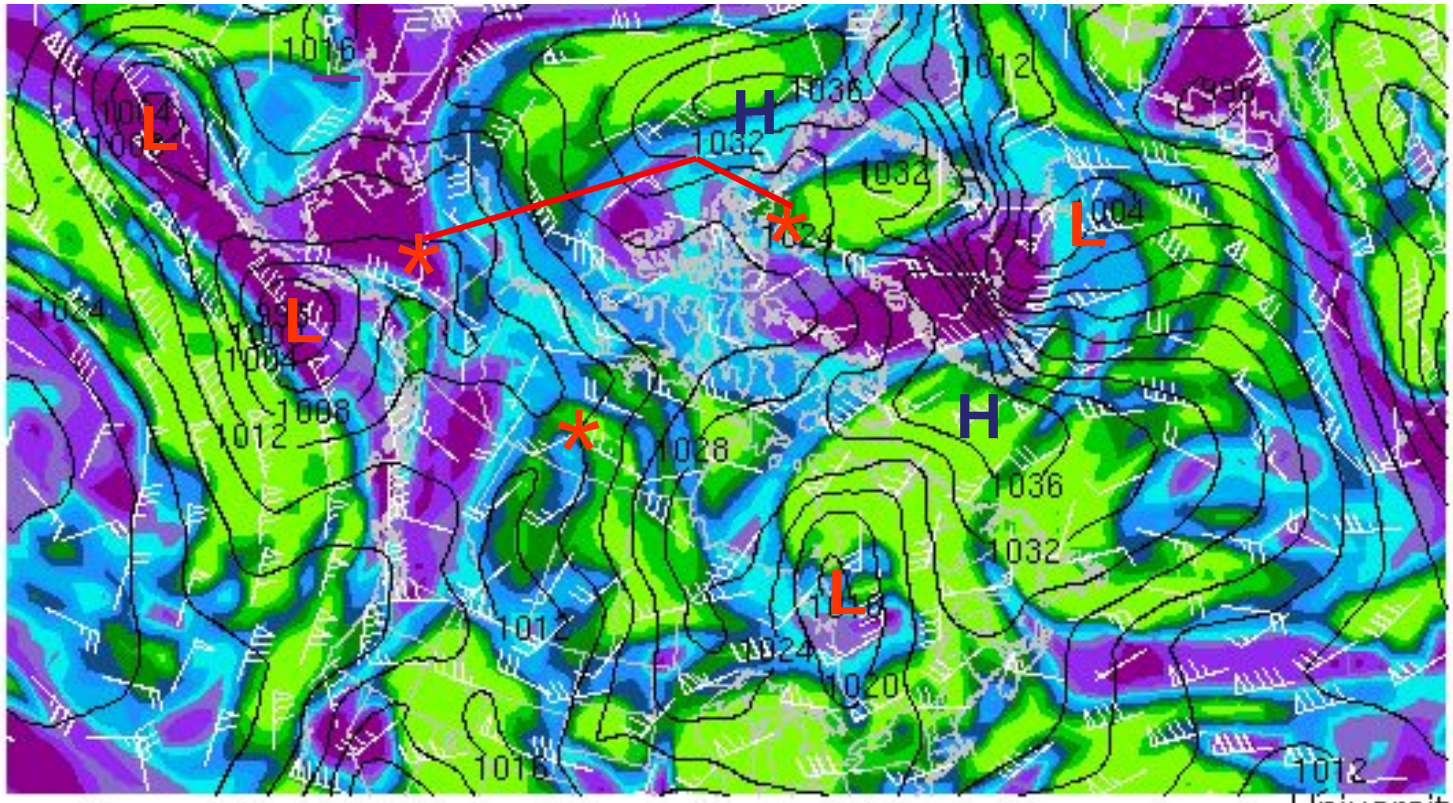
60 Hour 700 hPa Forecast Valid 18Z Mon 07 Apr 2008

GFS Forecast Valid 1800Z April 8
300 hPa Relative Humidity and Heights

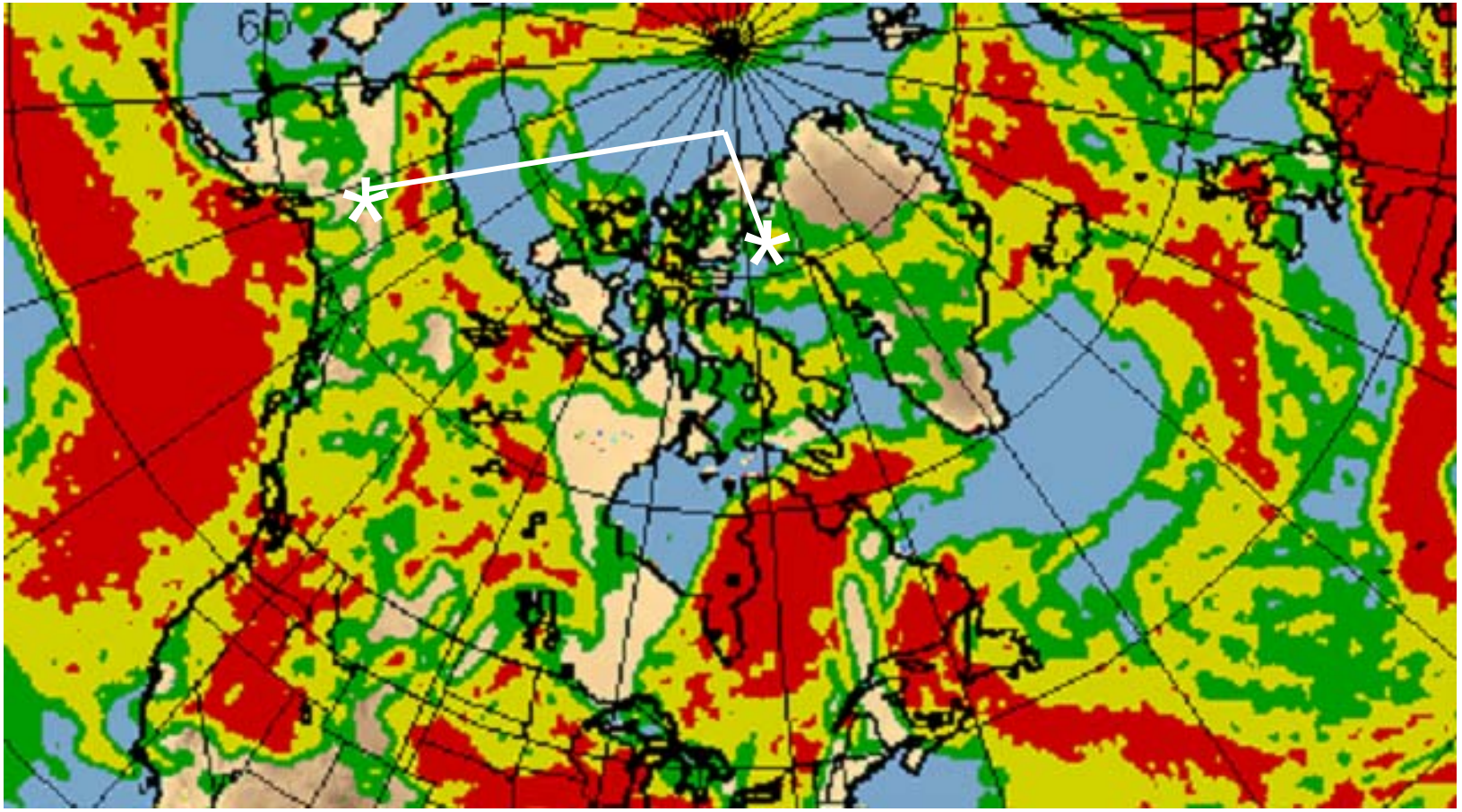


10 20 30 40 50 60 70 80 90

University of Wyoming

60 Hour 300 hPa Forecast Valid 18Z Tue 08 Apr 2008

Air Force Total Cloud Cover for comparison
Valid 1800 Z April 8

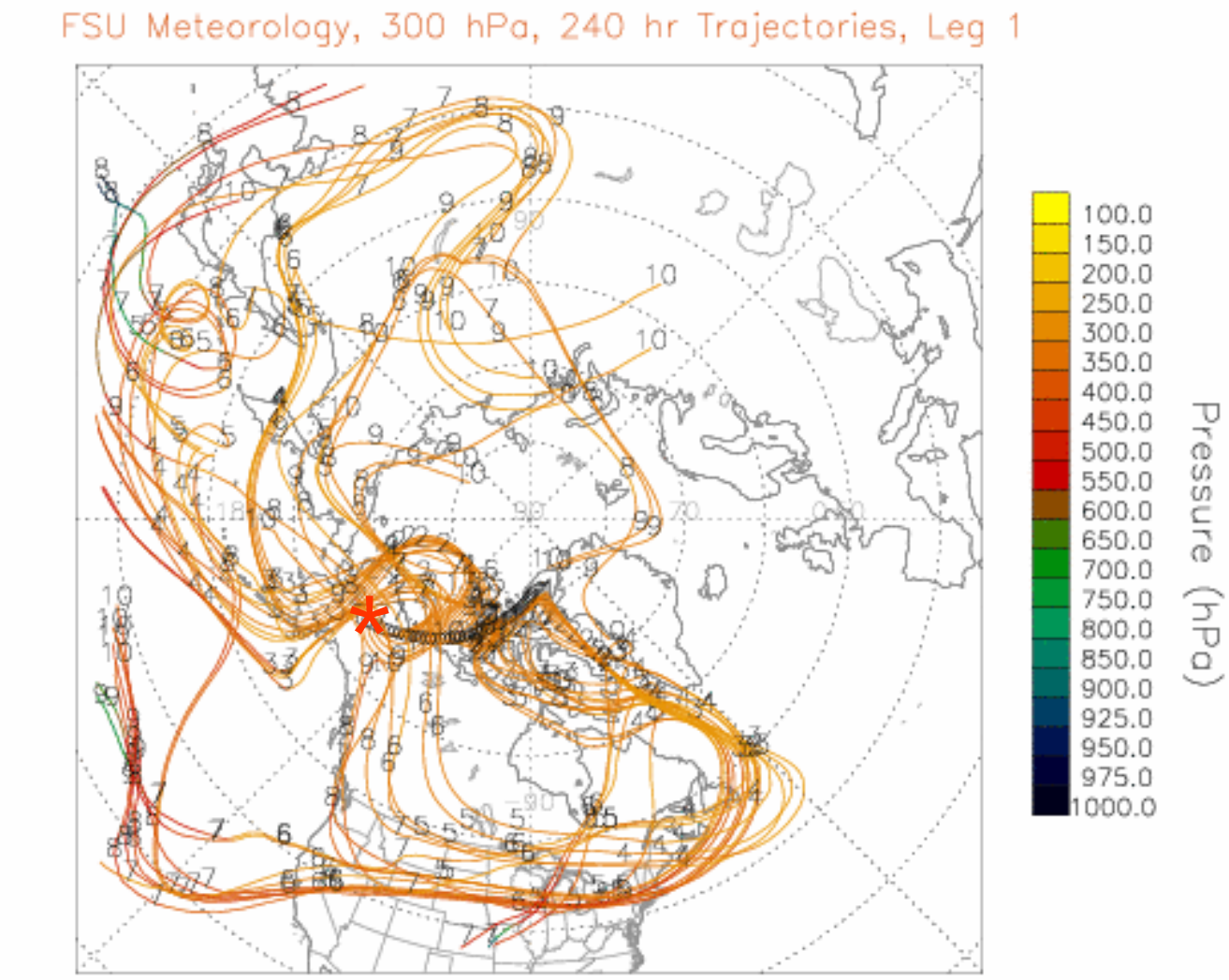


Red = Overcast **Yellow = 0.6-0.9 coverage** **Green = 0.1-0.5 coverage**

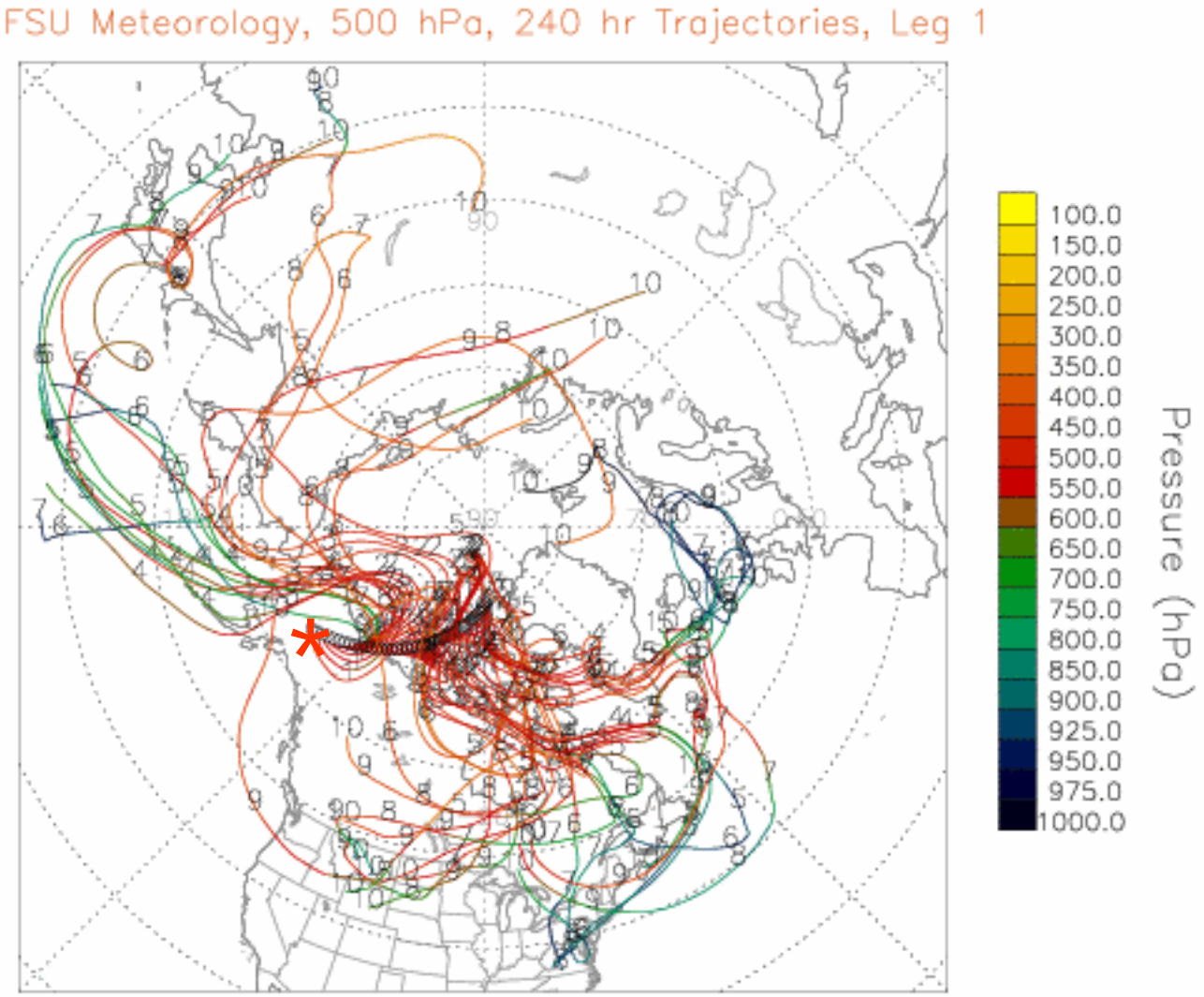
FSU Trajectories for Tuesday

- Met data from FSU WRF run (25 km grid)
- 10 days backwards in time
- Color coded by altitude
- Leg 1: Fairbanks to Eureka
- Leg 2: Eureka to Thule

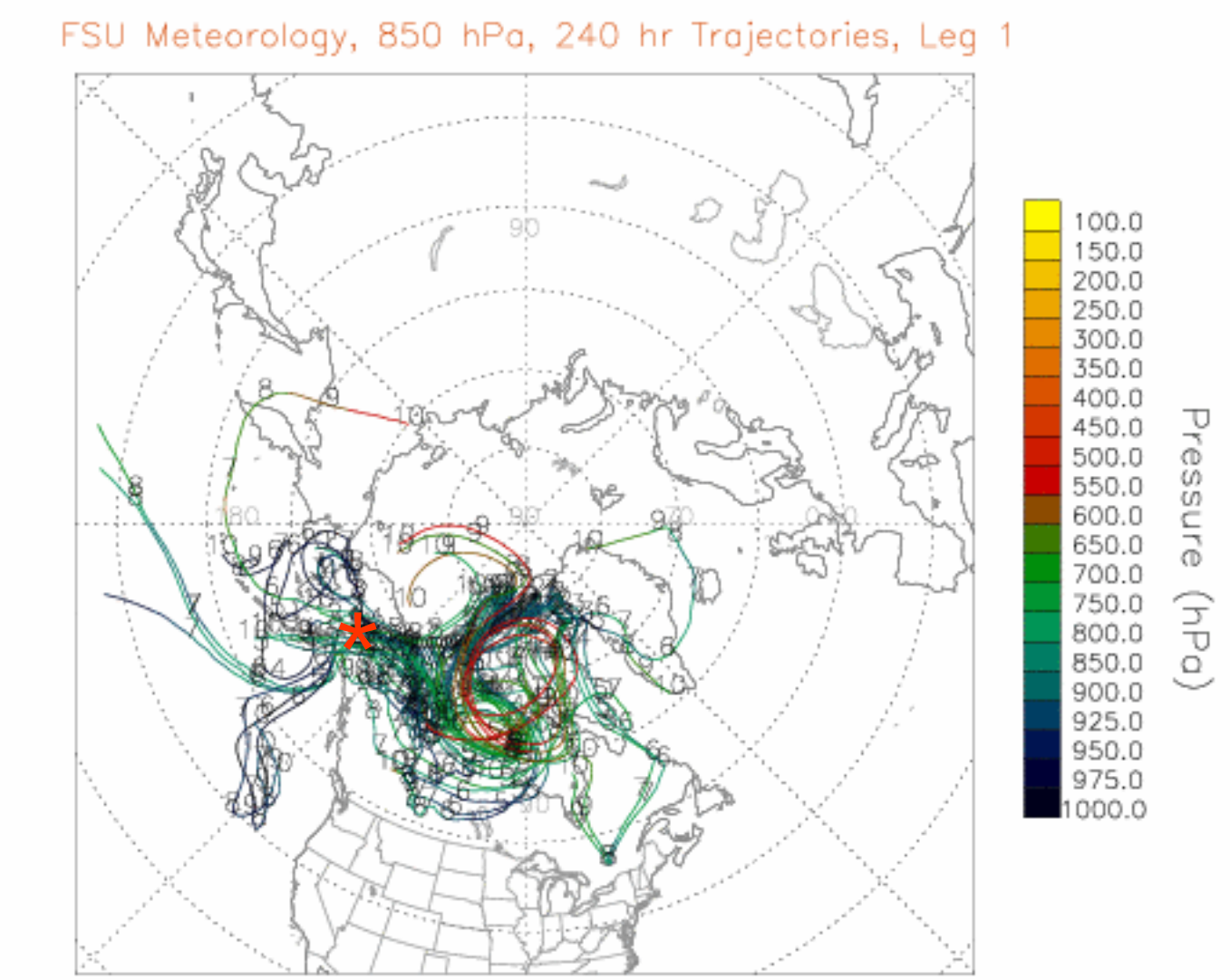
FSU 10 Day Backward Trajectories from 300 hPa Leg 1



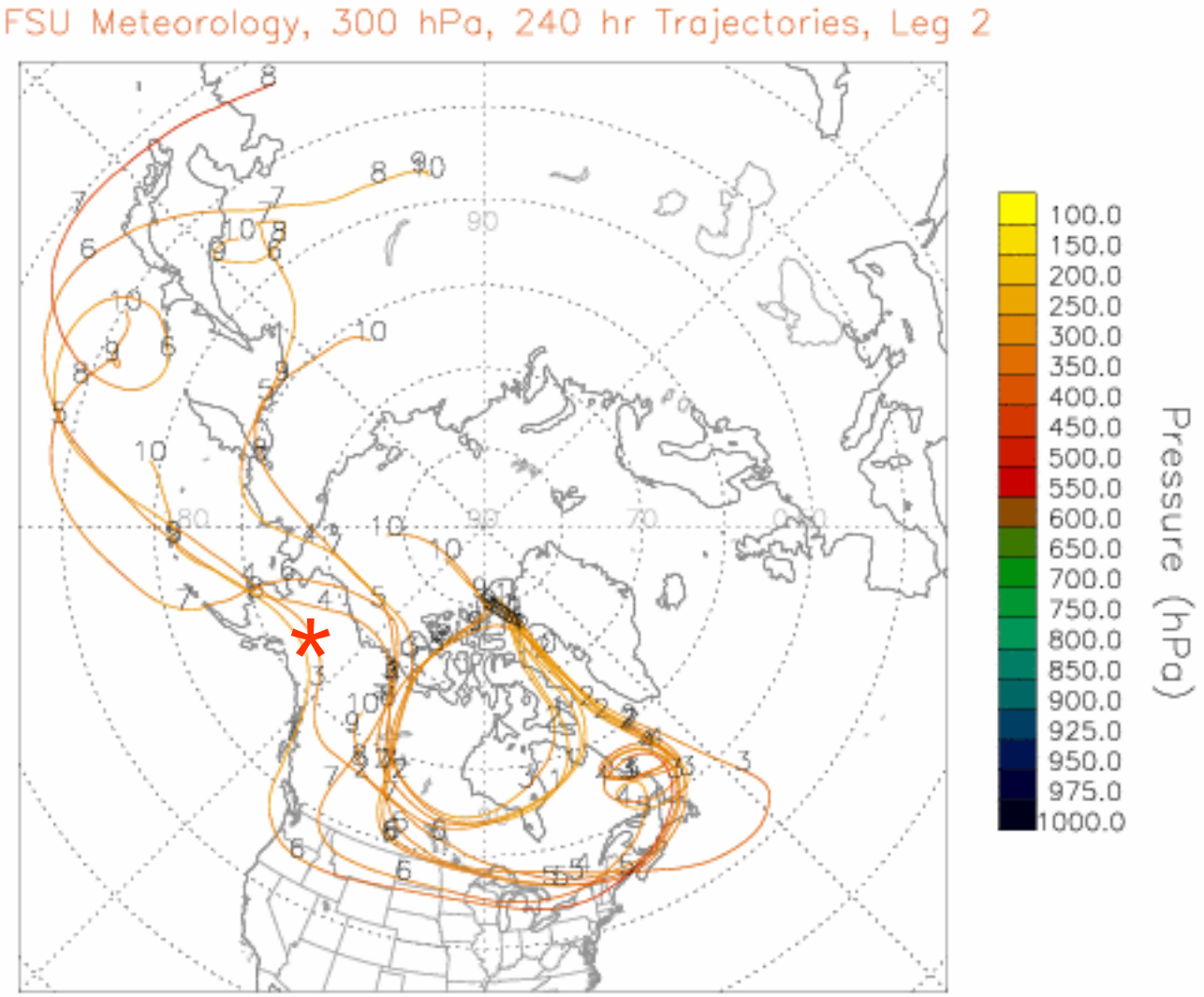
FSU 10 Day Backward Trajectories from 500 hPa Leg 1



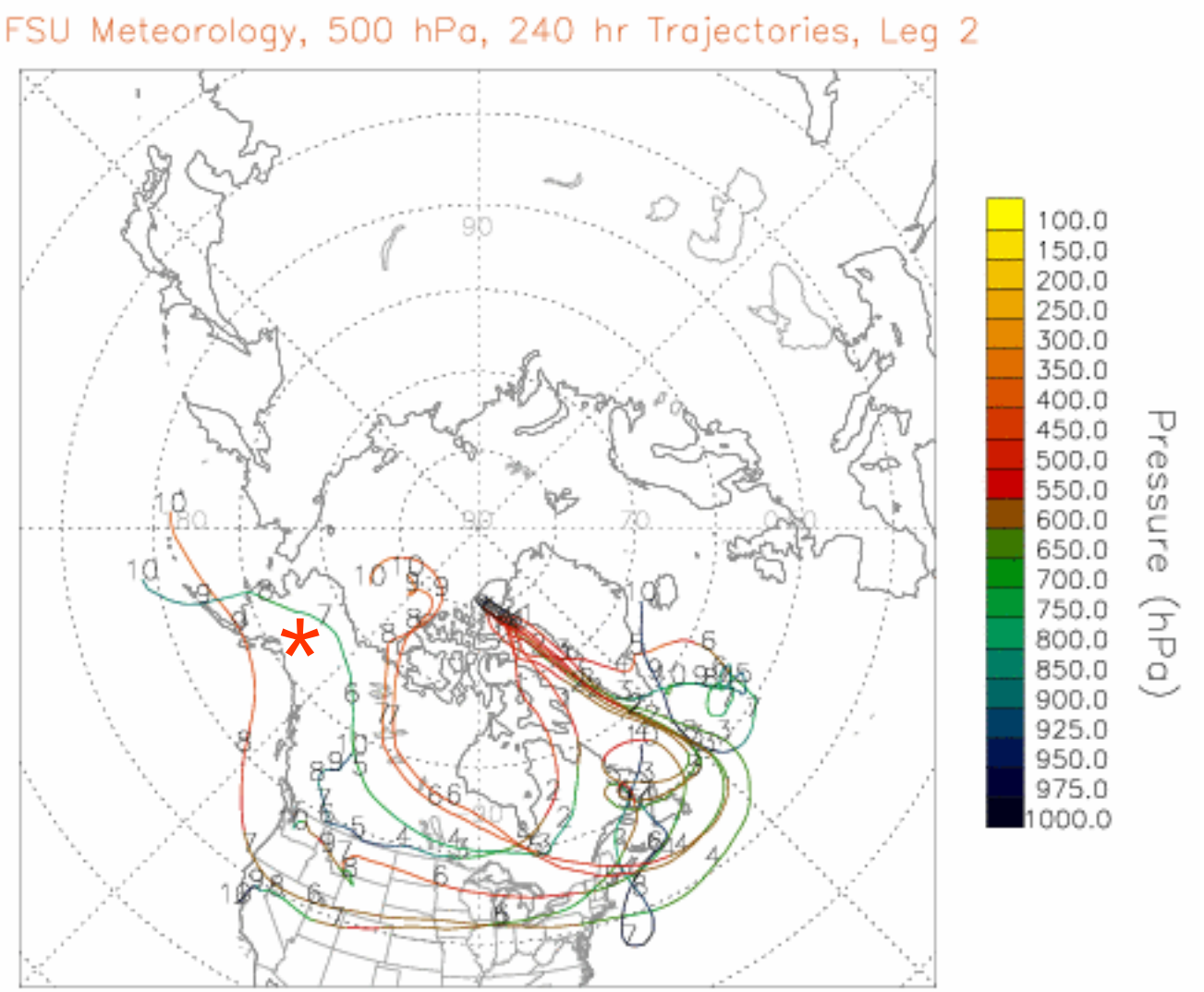
FSU 10 Day Backward Trajectories from 850 hPa Leg 1



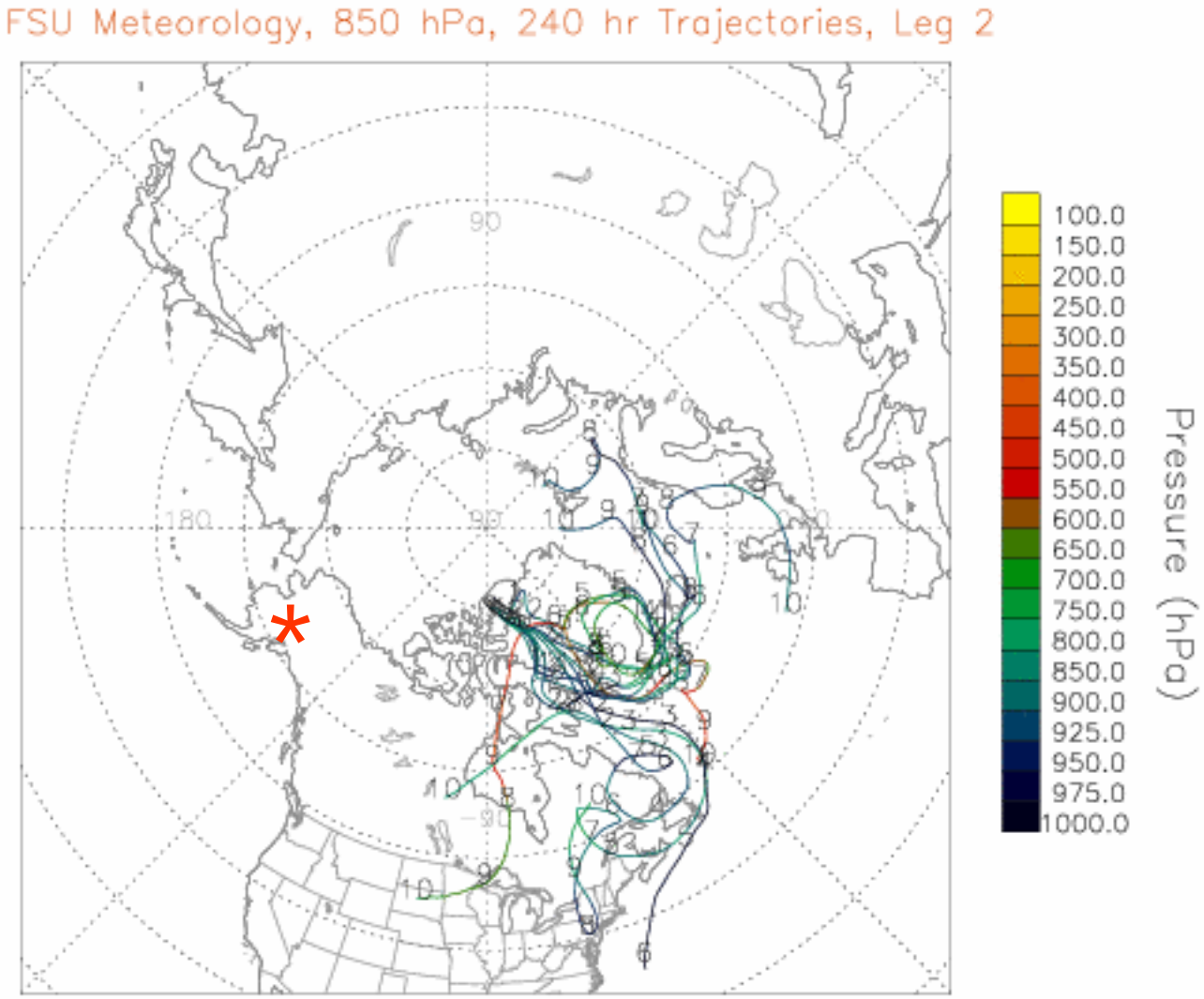
FSU 10 Day Backward Trajectories from 300 hPa Leg 2



FSU 10 Day Backward Trajectories from 500 hPa Leg 2

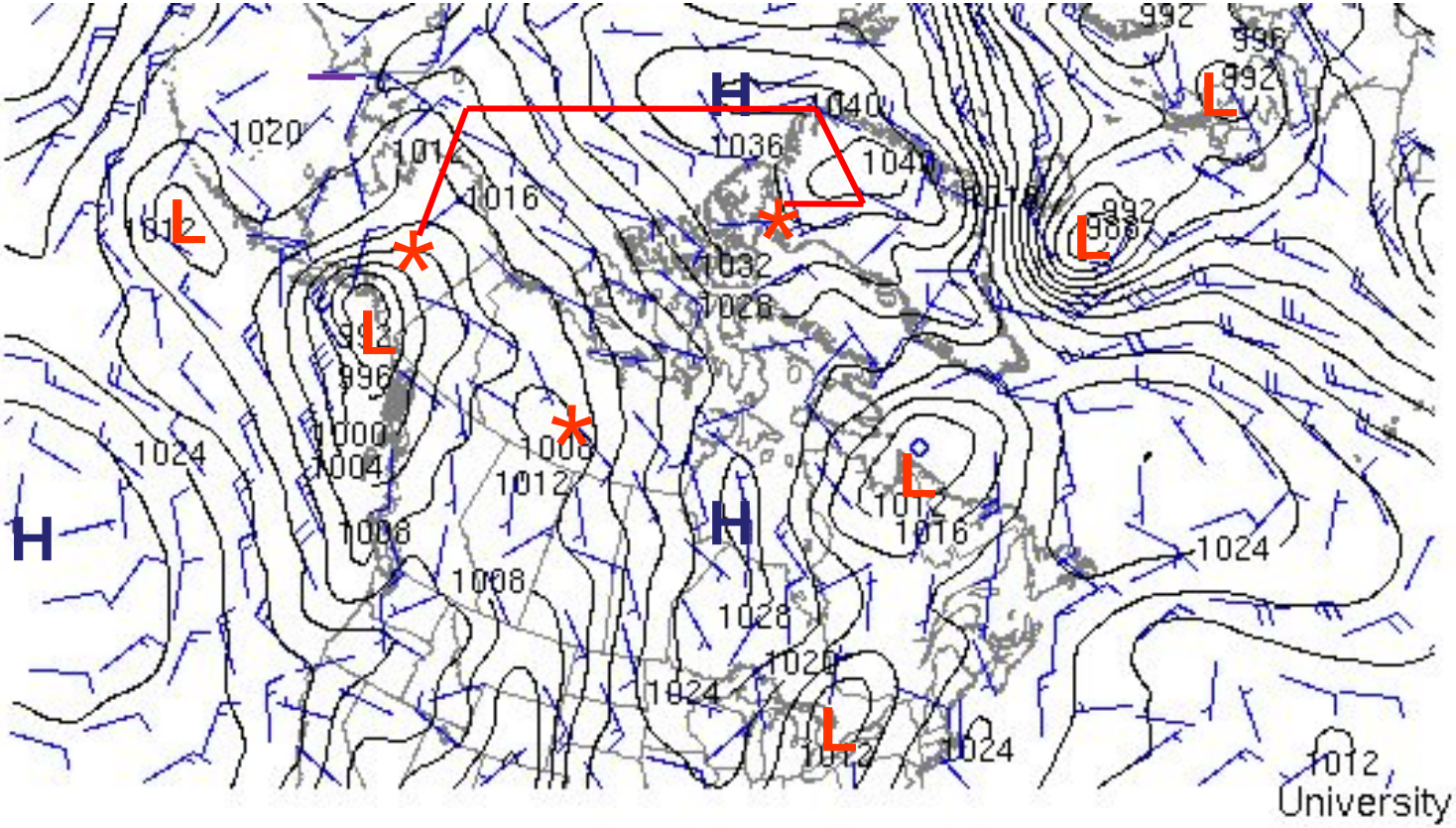


FSU 10 Day Backward Trajectories from 850 hPa Leg 2



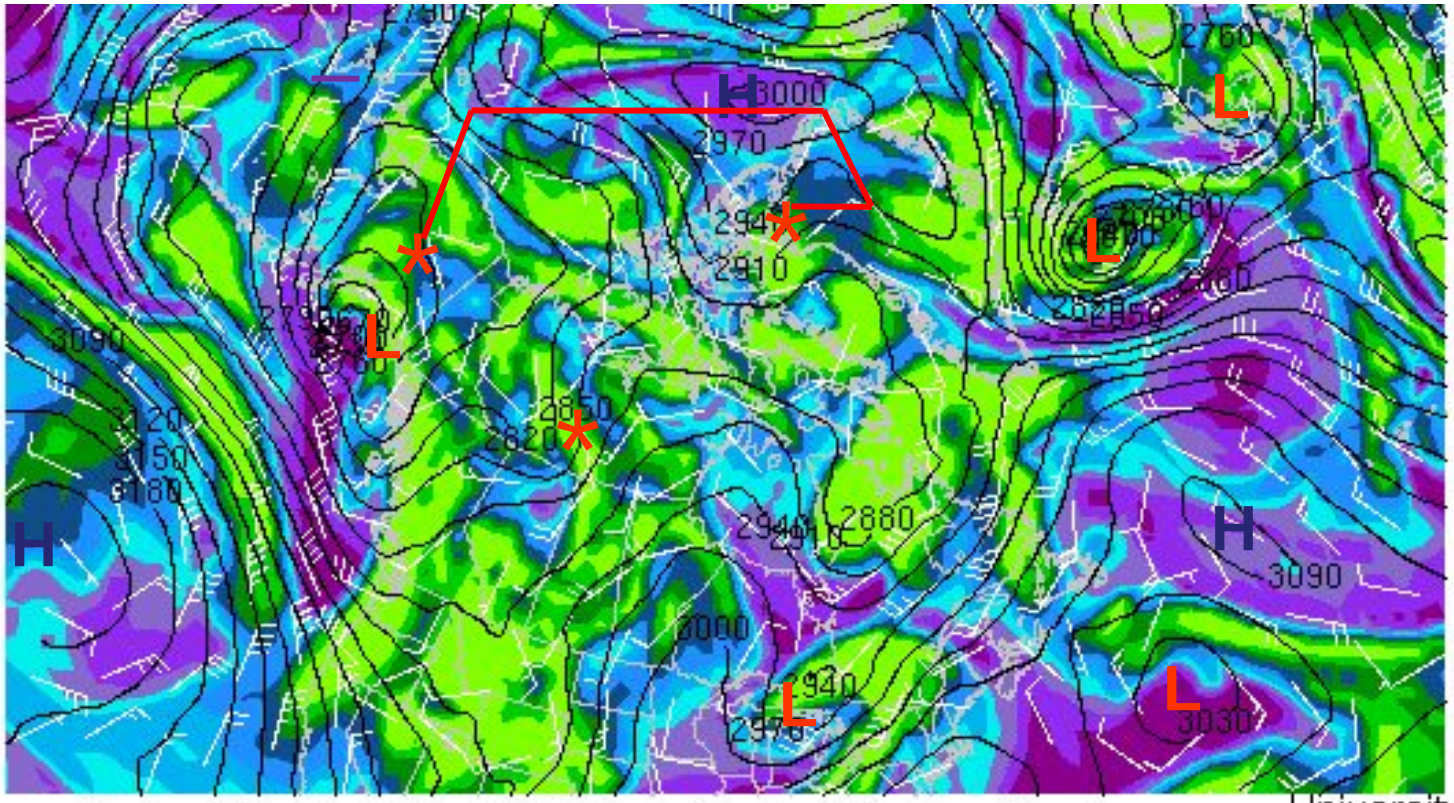
What About Wednesday??

GFS Forecast Valid 1800Z April 9
SLP and Winds



84 Hour Surface Forecast Valid 18Z Wed 09 Apr 2008

GFS Forecast Valid 1800Z April 9
700 hPa Relative Humidity and Heights



10 20 30 40 50 60 70 80 90

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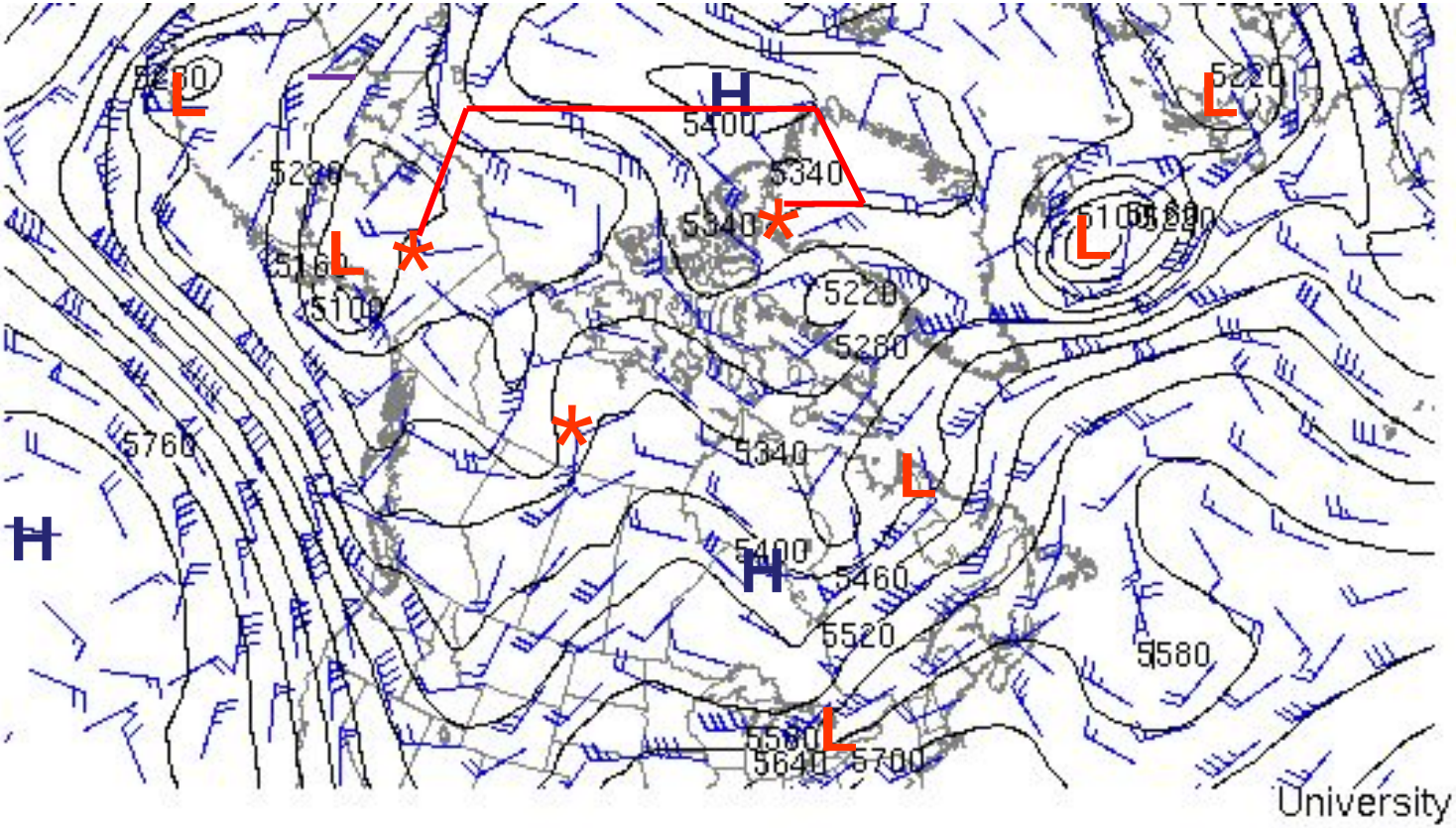
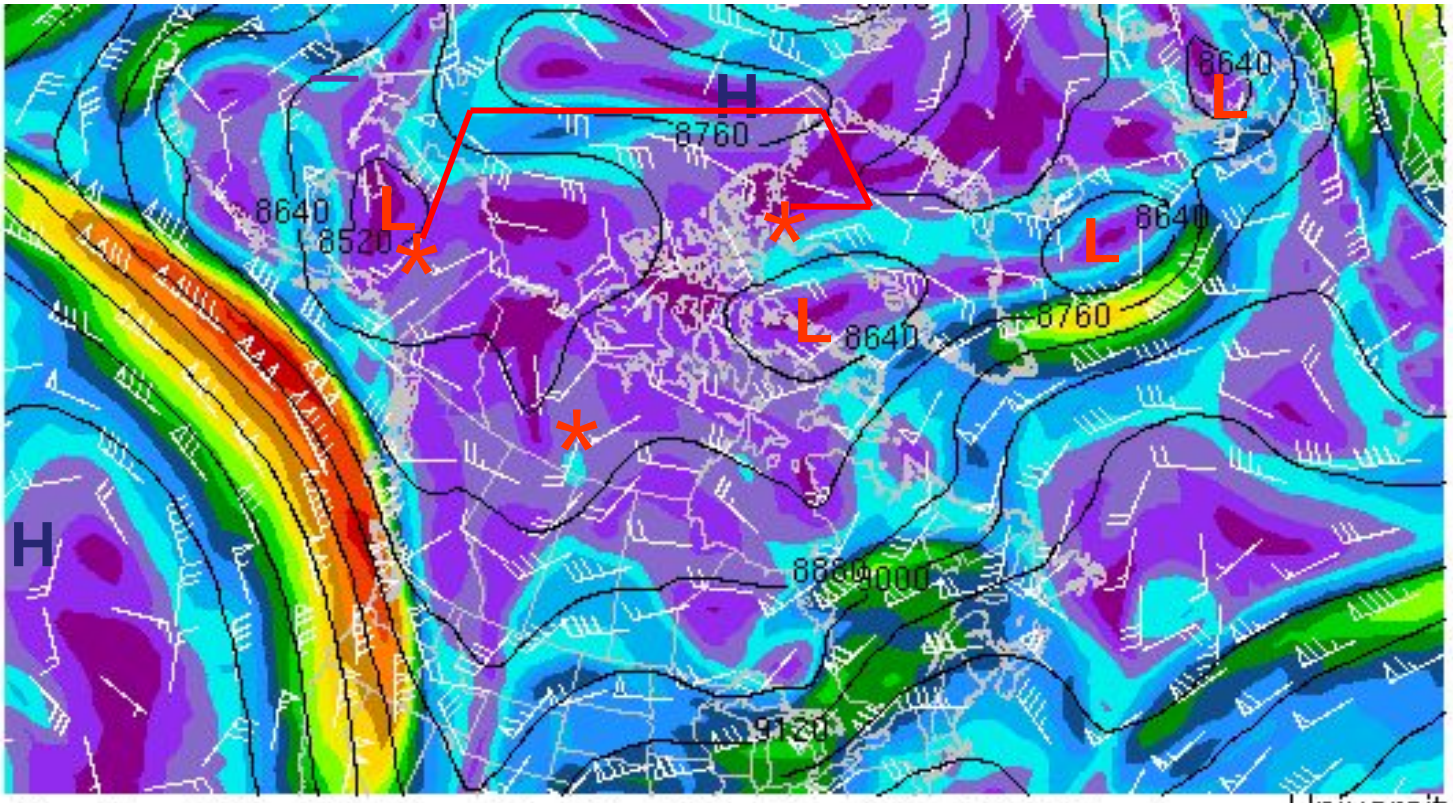
84 Hour 700 hPa Forecast Valid 18Z Wed 09 Apr 2008

GFS Forecast Valid 1800Z April 9
500 hPa Heights and Winds



84 Hour 500 hPa Forecast Valid 18Z Wed 09 Apr 2008

GFS Forecast Valid 1800Z April 9
300 hPa Heights and Winds



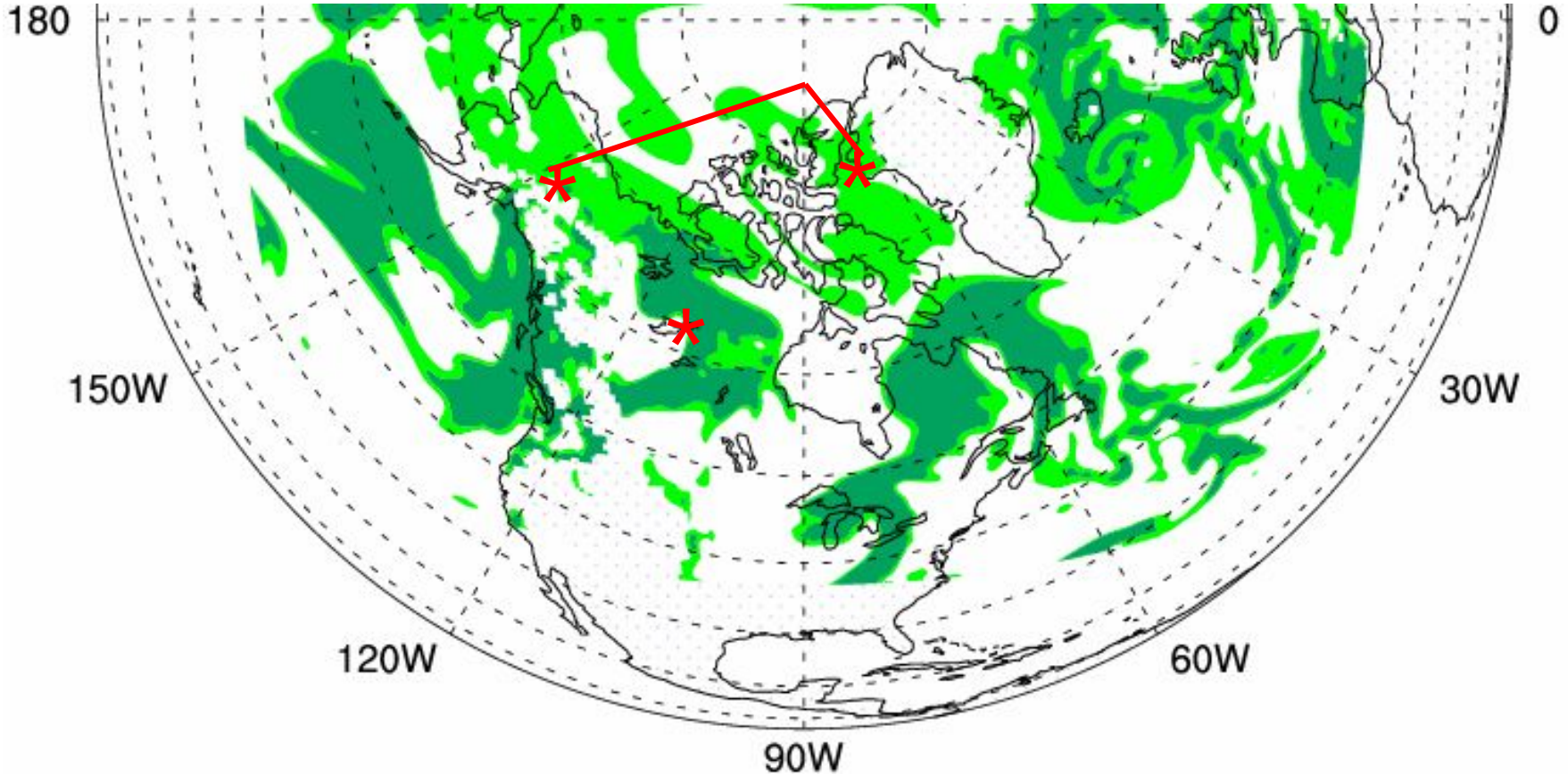
20 30 40 50 60 70 80 90 100 110 120 130 140 150

University of Wyoming

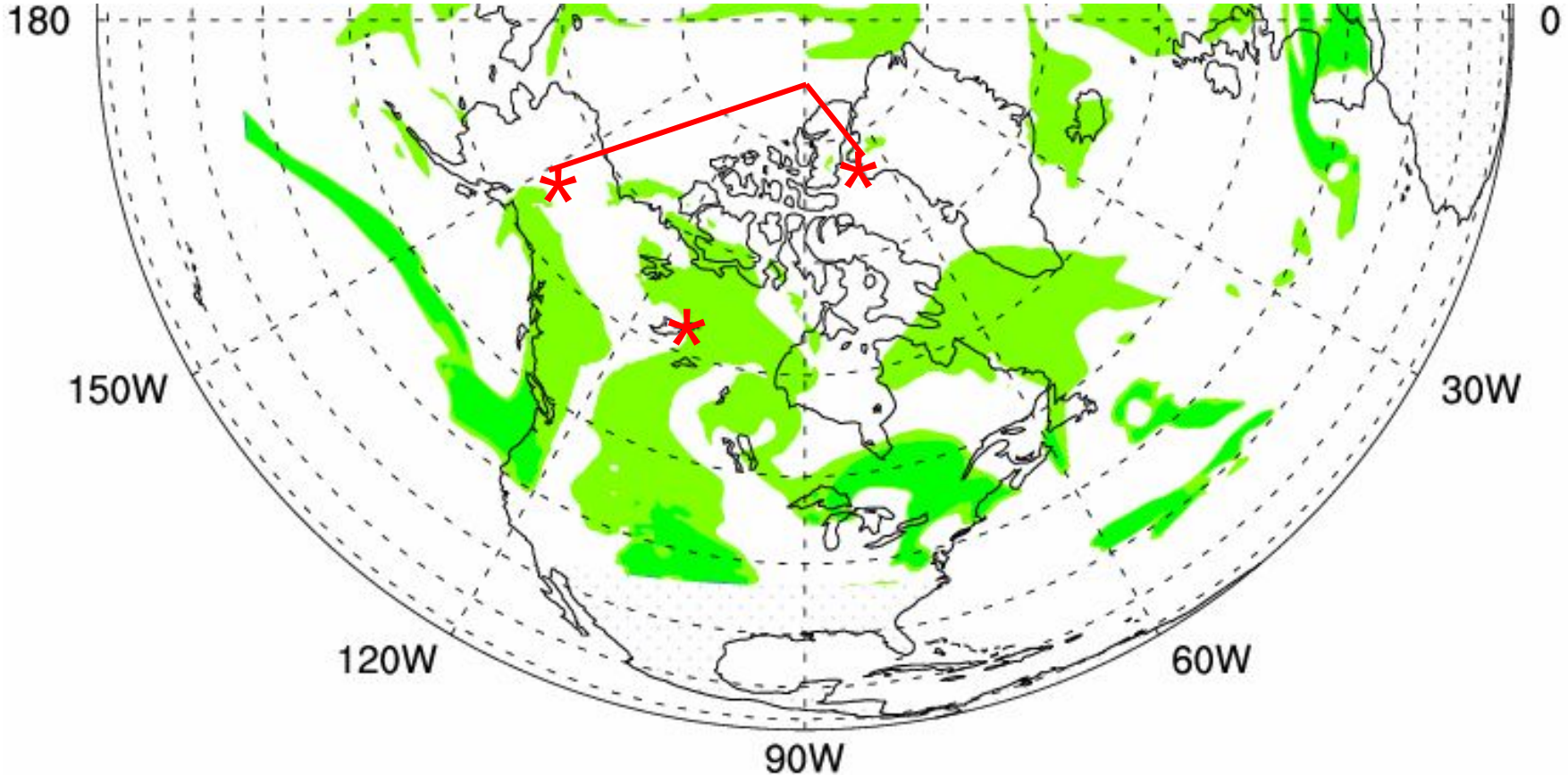
84 Hour 300 hPa Forecast Valid 18Z Wed 09 Apr 2008

What About Wednesday's Clouds??

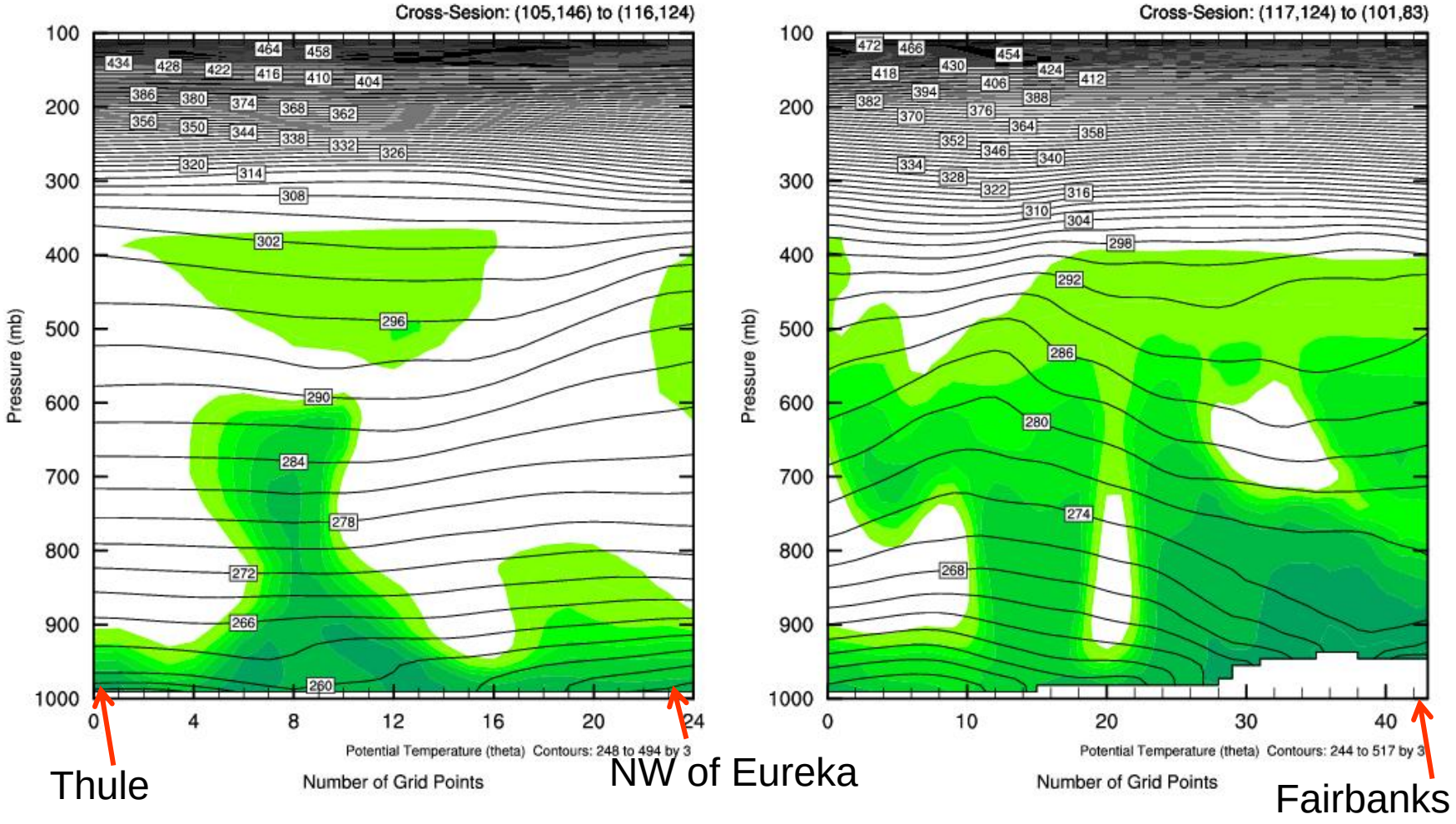
FSU WRF Relative Humidity at 850 hPa Forecast
Valid 1800 Z April 9



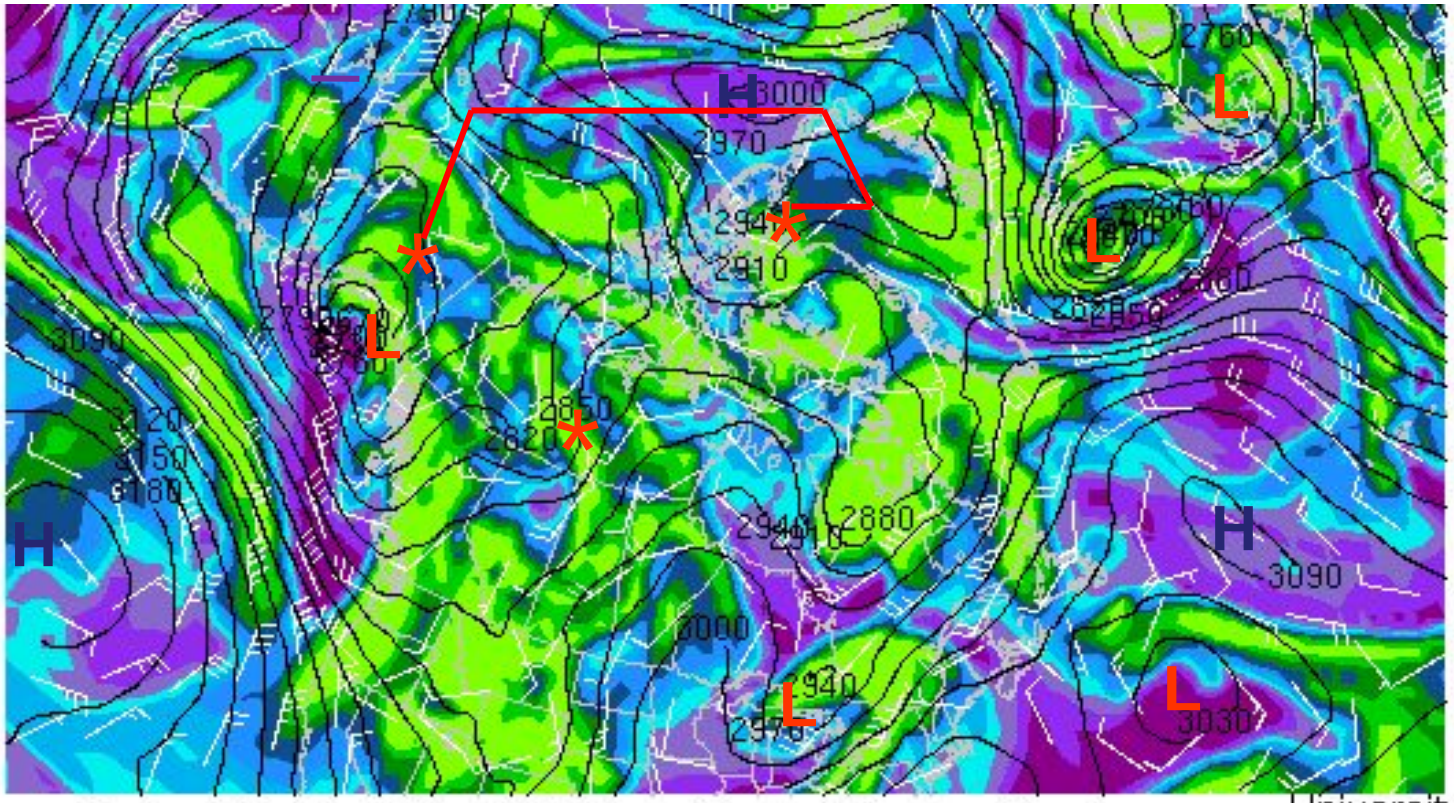
FSU WRF Relative Humidity at 500 hPa Forecast
Valid 1800 Z April 9



FSU WRF RH Cross Section DC-8 Flight Path Forecast for Suitcase Flight Valid 1800 Z April 9



GFS Forecast Valid 1800Z April 9
700 hPa Relative Humidity and Heights



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University of Wyoming

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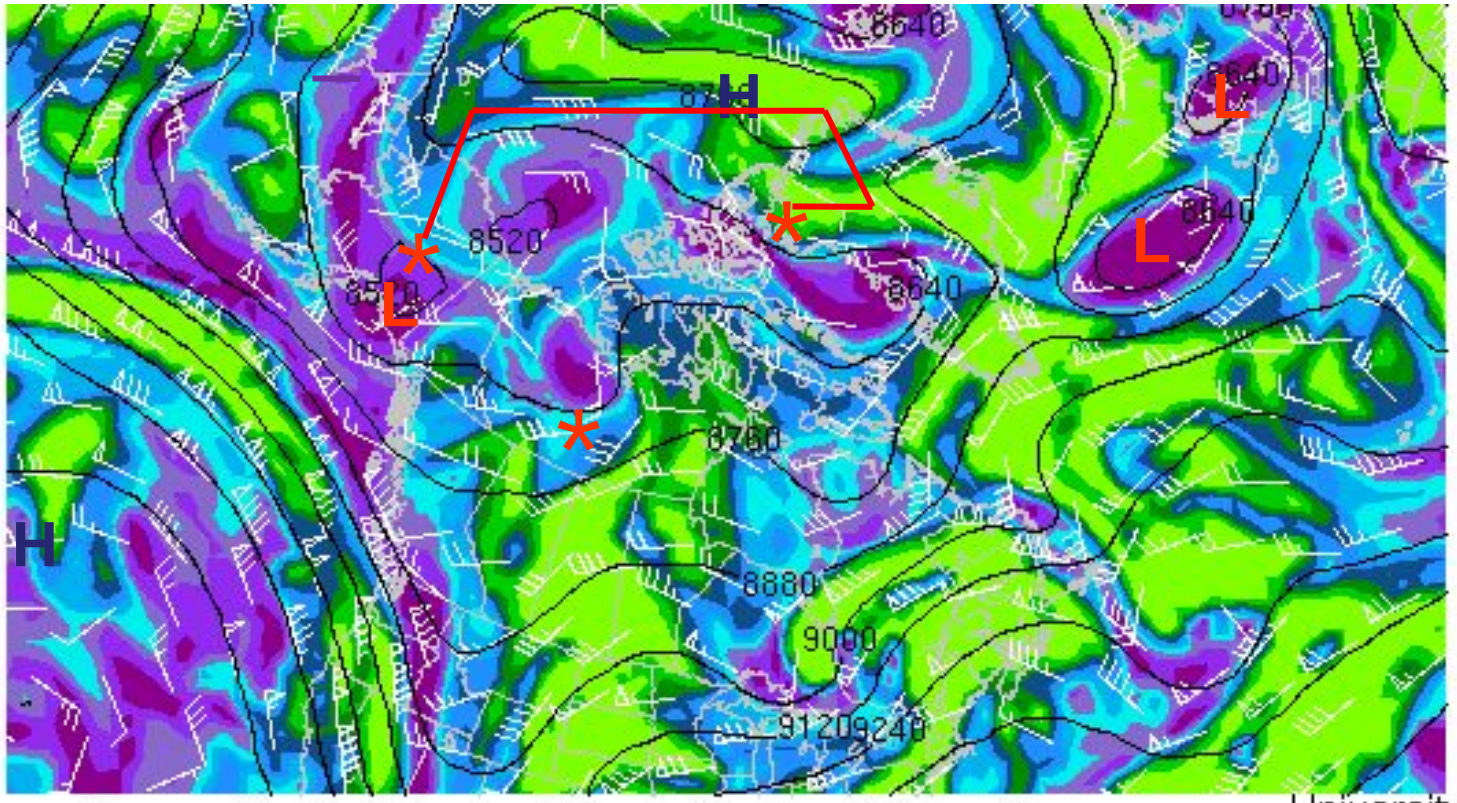
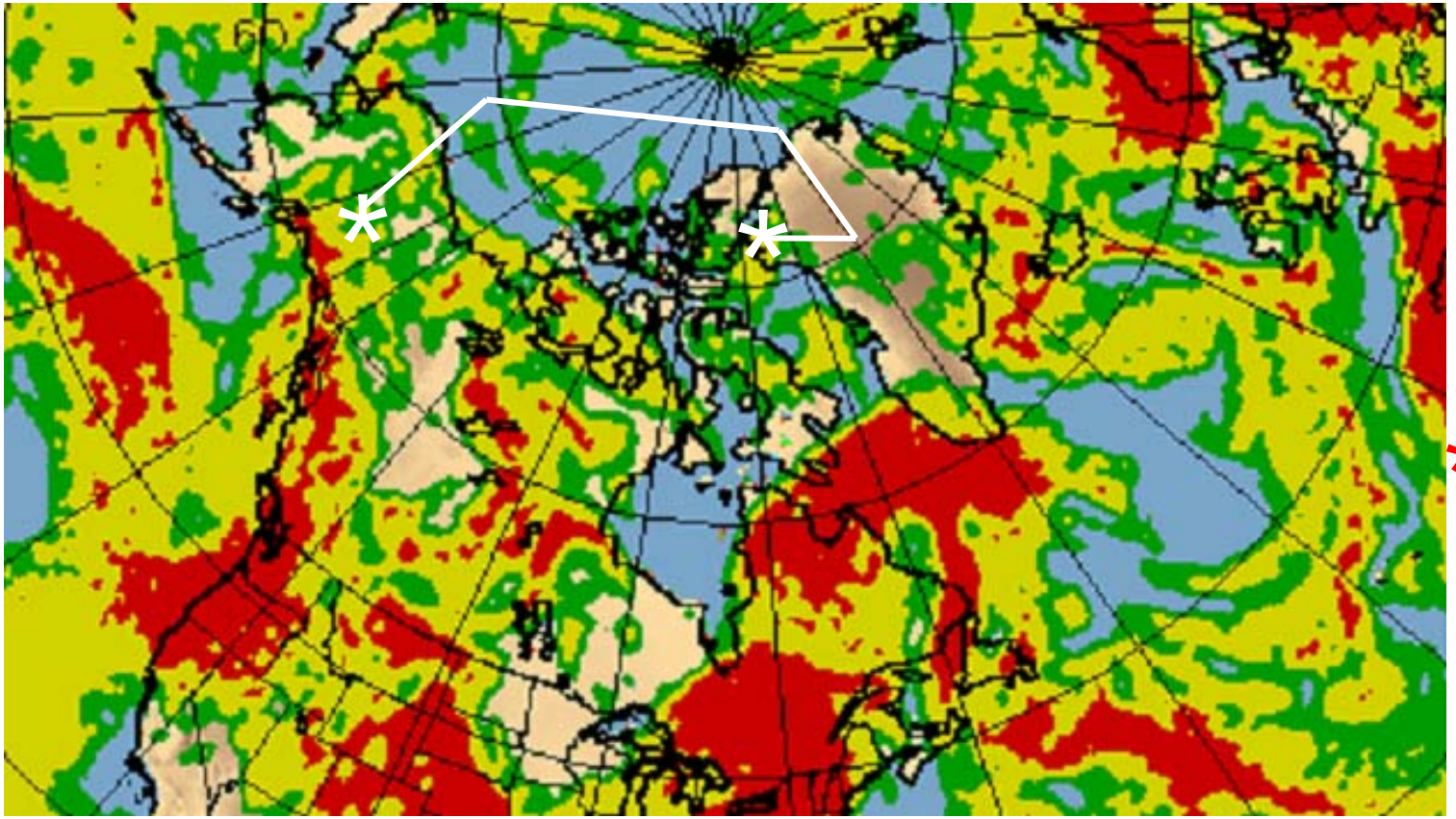
300 hPa Relative Humidity and Heights

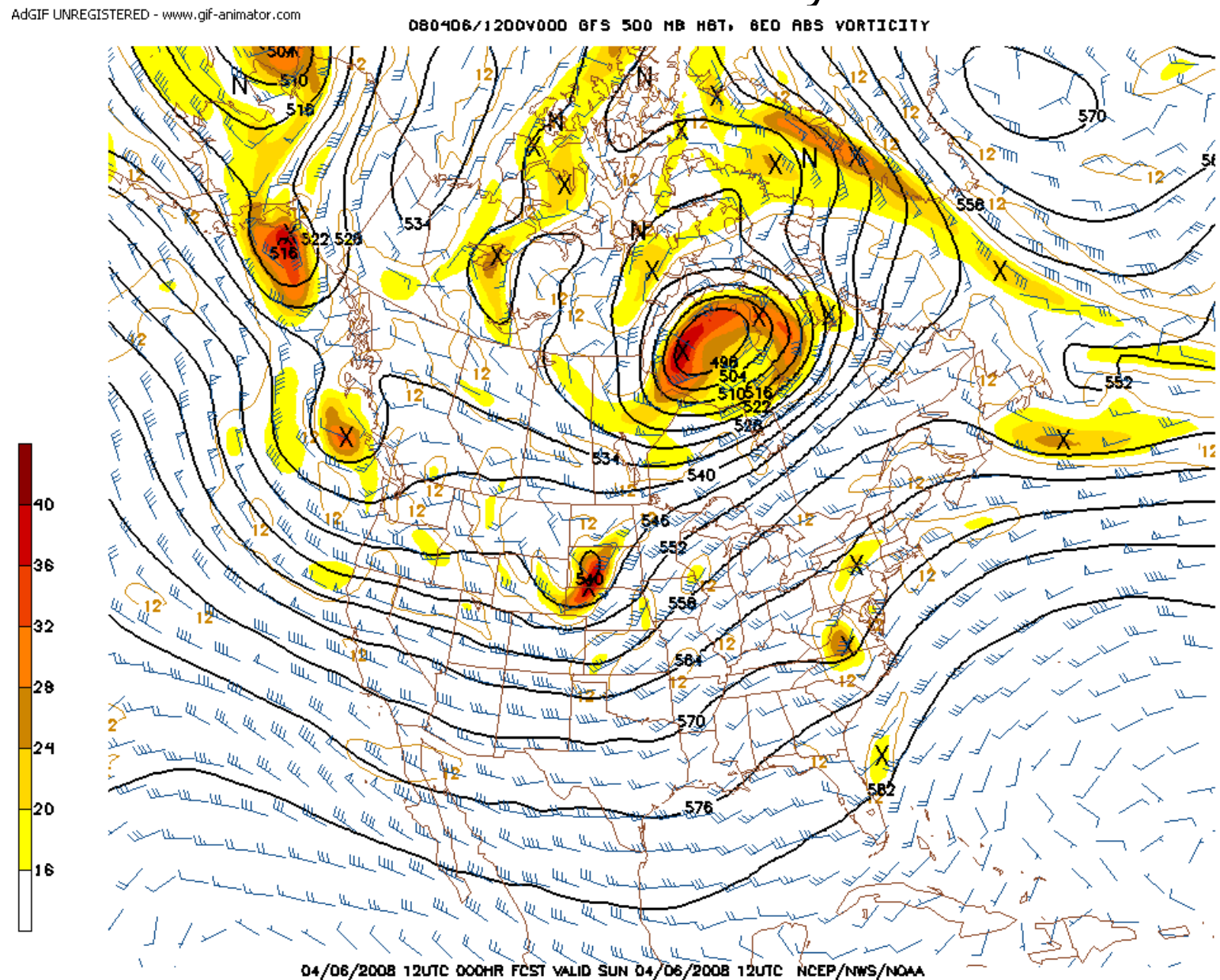


Air Force Total Cloud Cover for comparison
Valid 1800 Z April 9



Red = Overcast **Yellow = 0.6-0.9 coverage** **Green = 0.1-0.5 coverage**

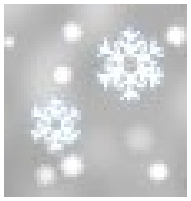
GFS Forecast next 156 hours 500 hPa Heights, Winds and Vorticity



Fairbanks AK Forecast

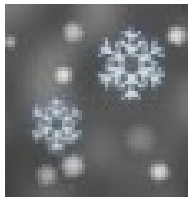
SNOW!!!!!!!!!!!!!!

Today



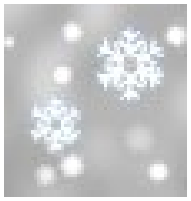
Snow likely
Hi: 30F

Tonight



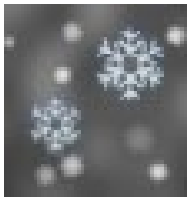
Snow
Showers
Lo: 15F

Monday



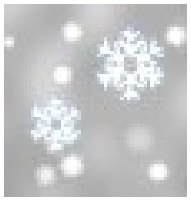
Scattered
Flurries
Hi: 30F

Mon. Night



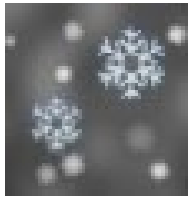
Scattered
Flurries
Lo: 18F

Tuesday



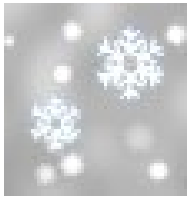
Scattered
Flurries
Hi: 35F

Tue. Night



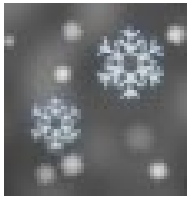
Chance of
Snow
Lo: 20F

Wednesday



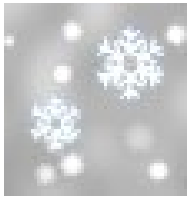
Chance
of Snow
Hi: 35F

Wed. Night



Chance
of Snow
Lo: 15F

Thursday



Chance
of Snow
Hi: 35F