Flight Day Conditions

April 15-16 ,2008

Henry Fuelberg
Andy Latto

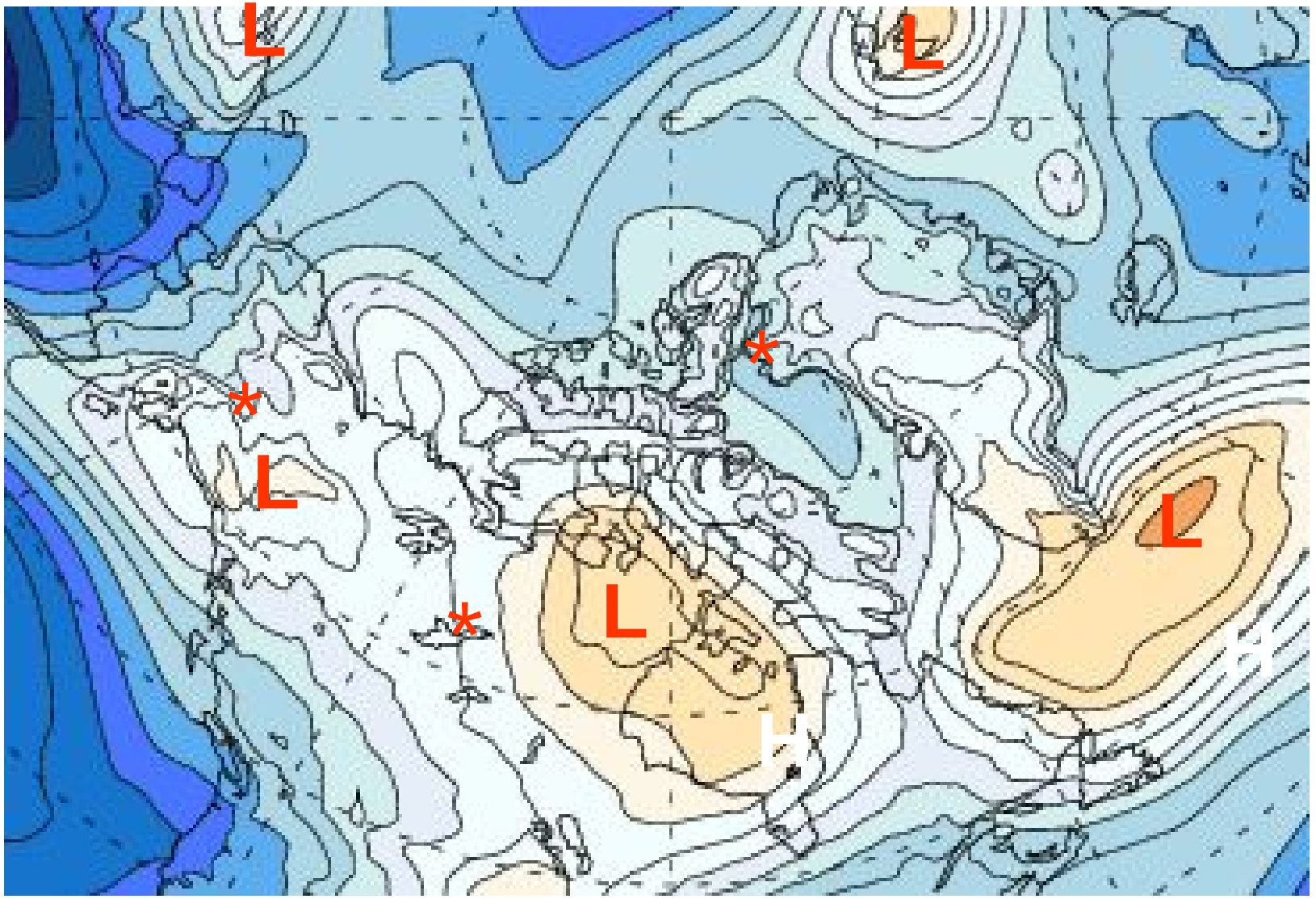
“Your Eyes to the Skies”

N43RF
UNITED STATES DEPT. OF COMMERCE

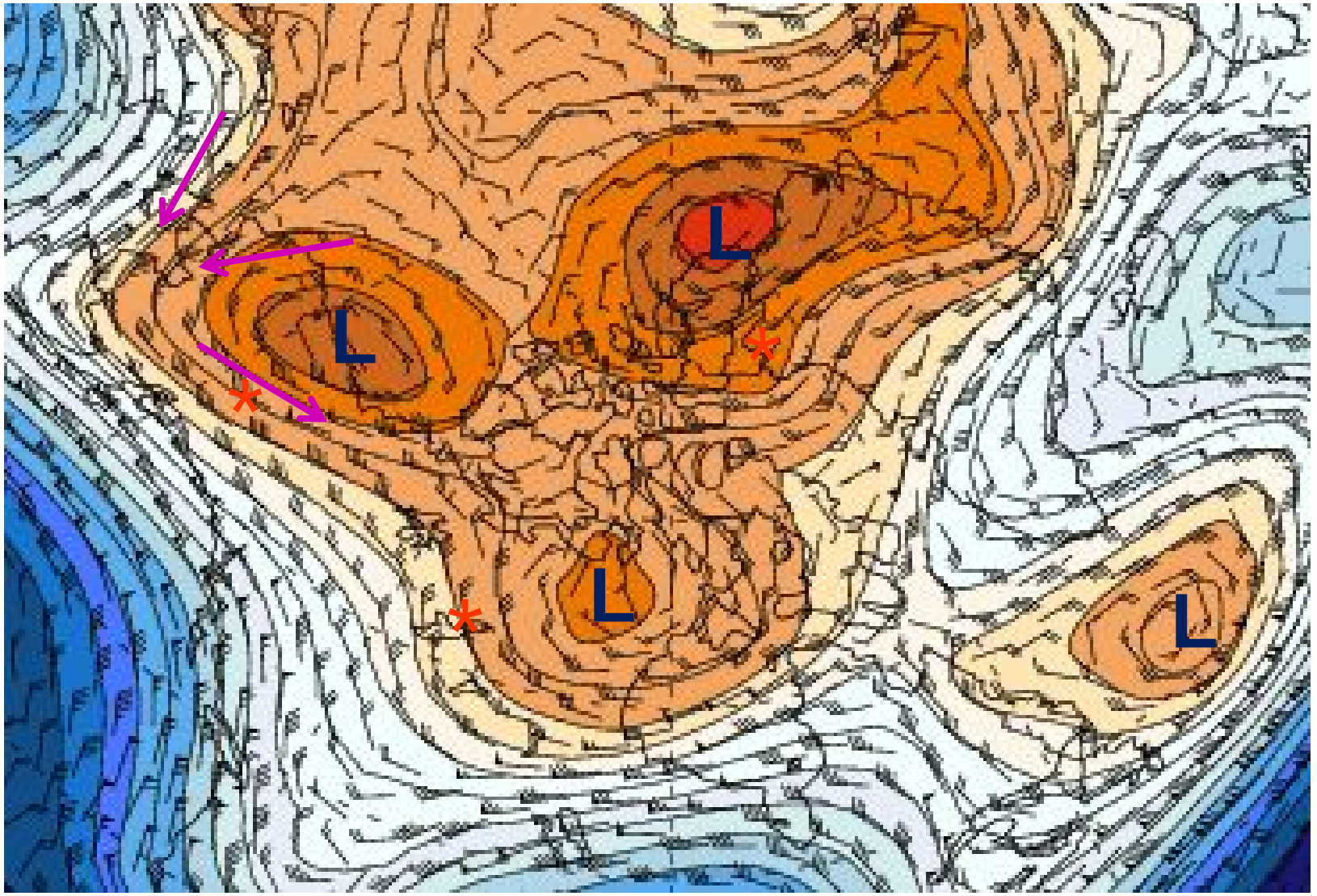
BACK ILS
HDG
VOR/ILS
ILS MAN
TAWS
PUSH TEST PUSH S/S
CANCEL

Forecast For Tuesday

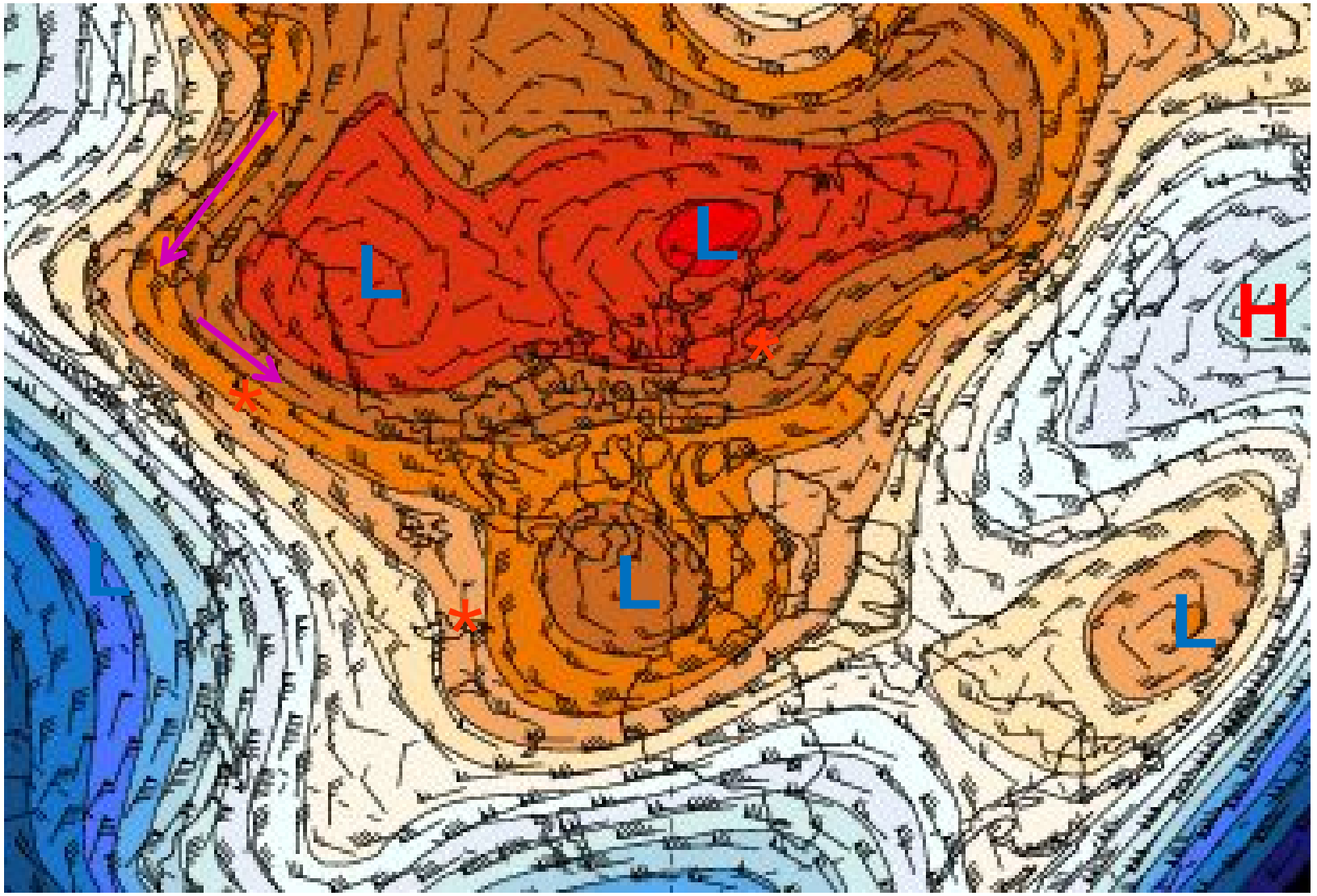
FSU WRF Forecast Valid 1800 Z April 15
Sea Level Pressure



FSU WRF Forecast Valid 1800 Z April 15
500 hPa Heights and Winds



FSU WRF Forecast Valid 1800 Z April 15
300 hPa Heights and Winds

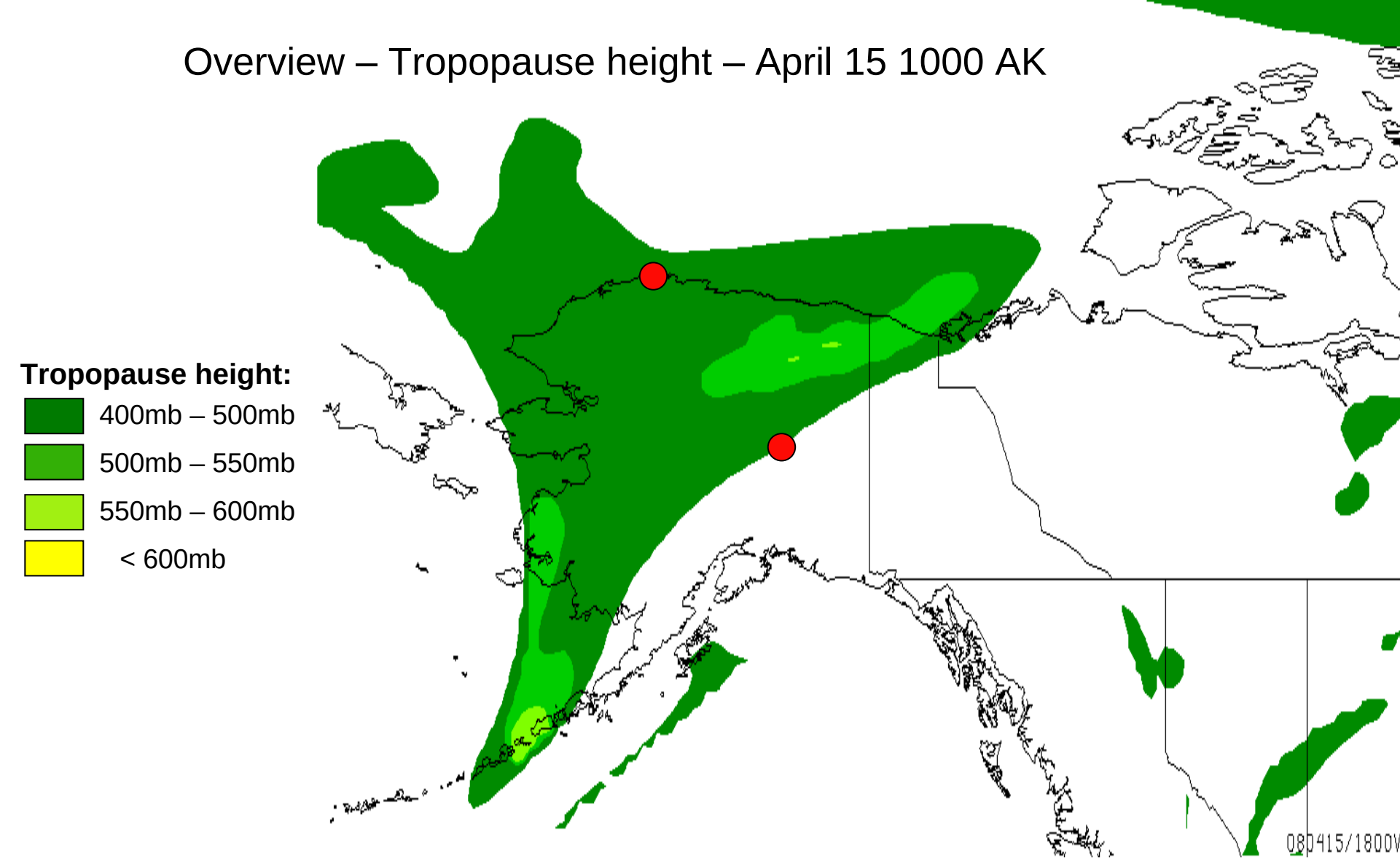


April 15, 2008
Tropopause Height Plan View

Alaska and Environs

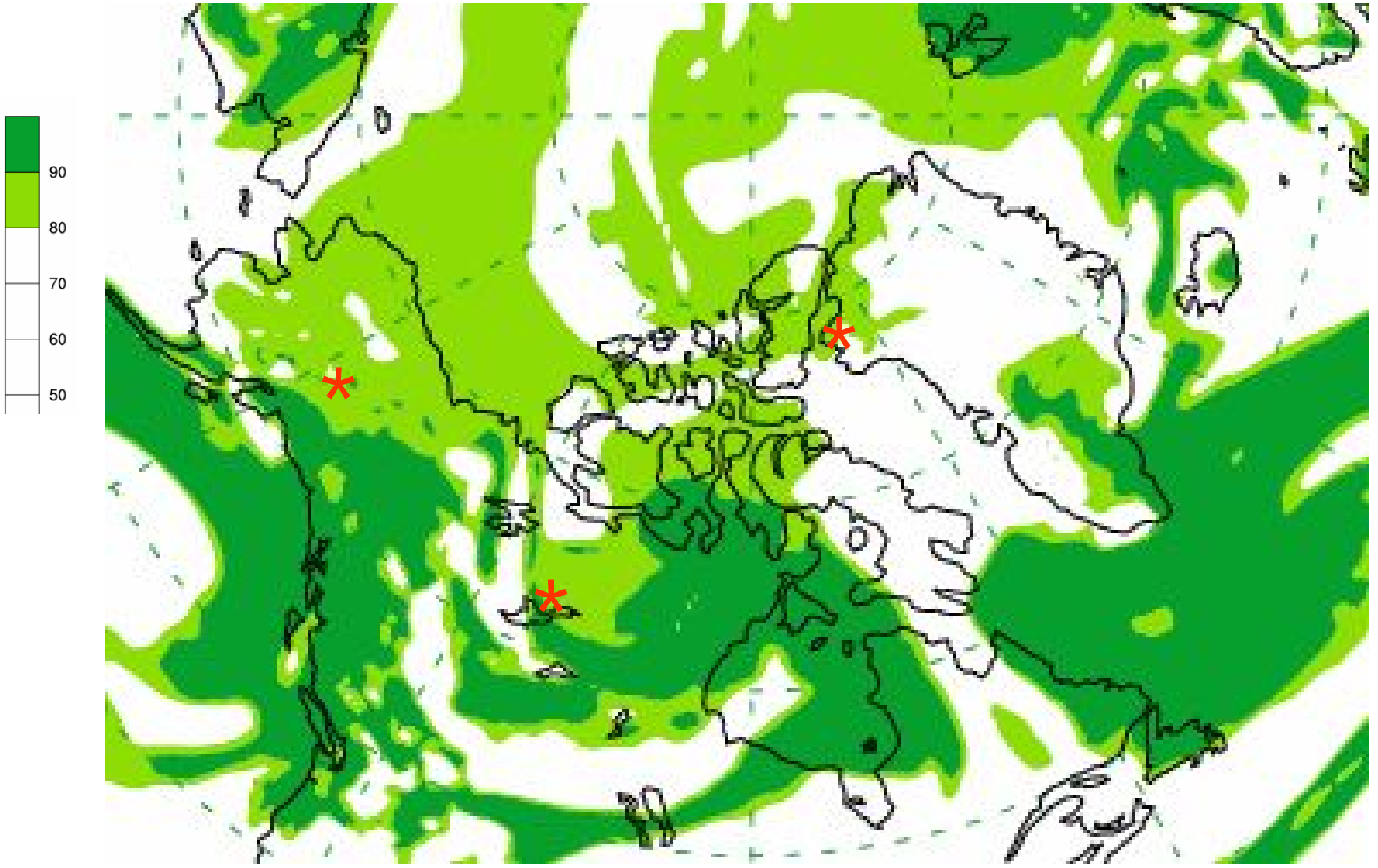
Atkinson, Cross, Malingowski
University of Alaska Fairbanks
International Arctic Research Center

Overview – Tropopause height – April 15 1000 AK

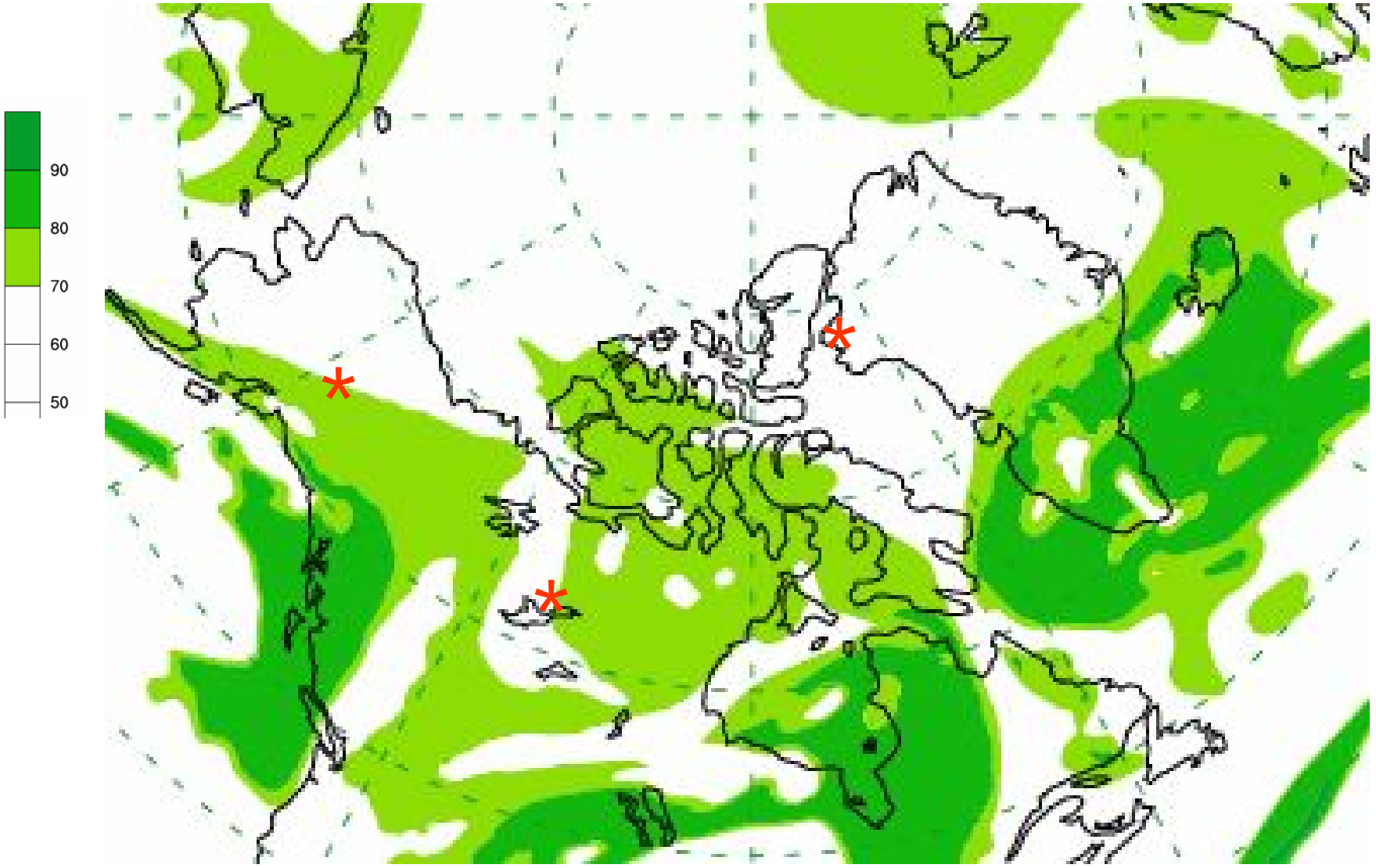


What About Clouds for Tuesday??

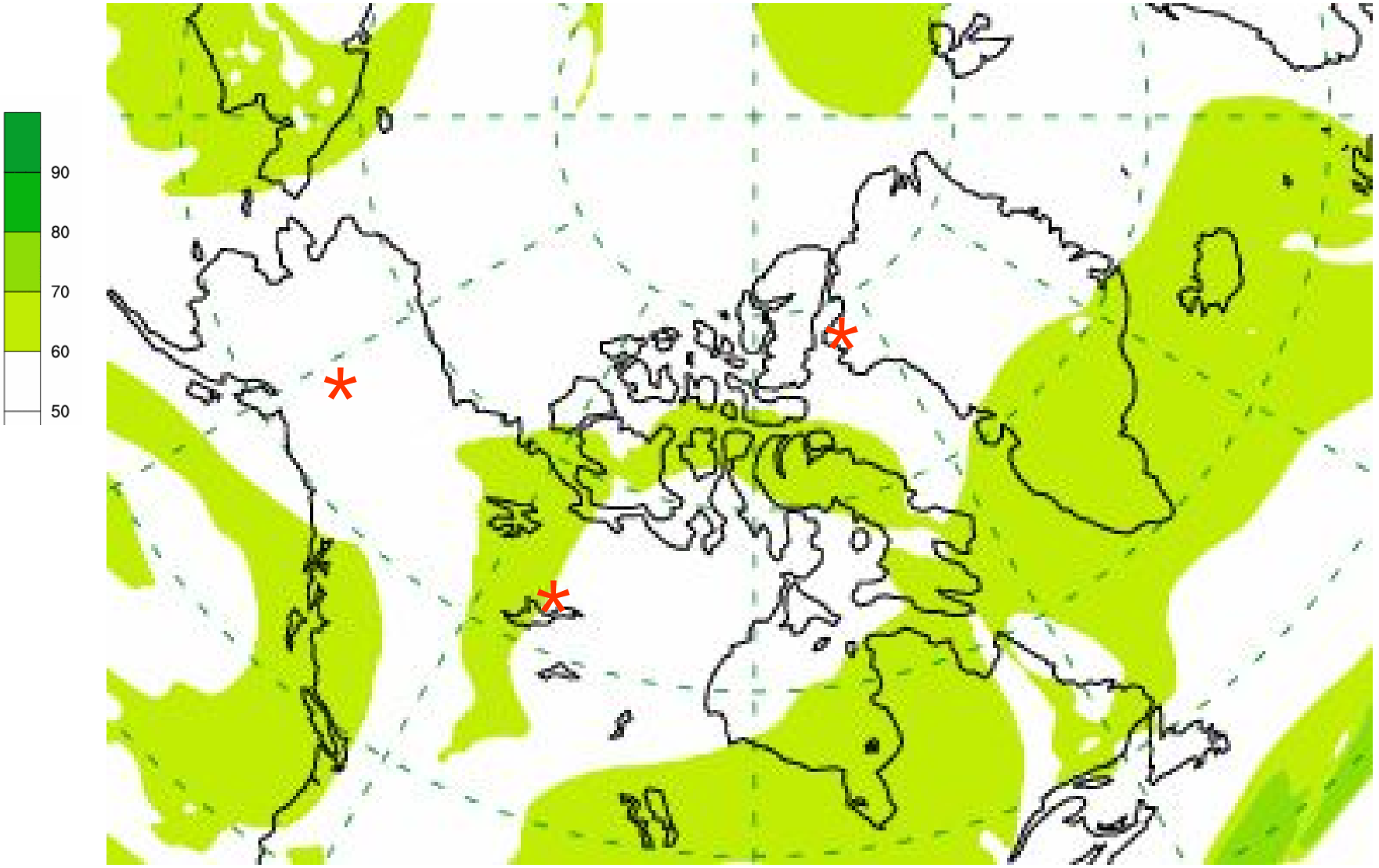
FSU WRF Relative Humidity at 850 hPa Forecast
Valid 1800 Z April 15



FSU WRF Relative Humidity at 500 hPa Forecast
Valid 1800 Z April 15

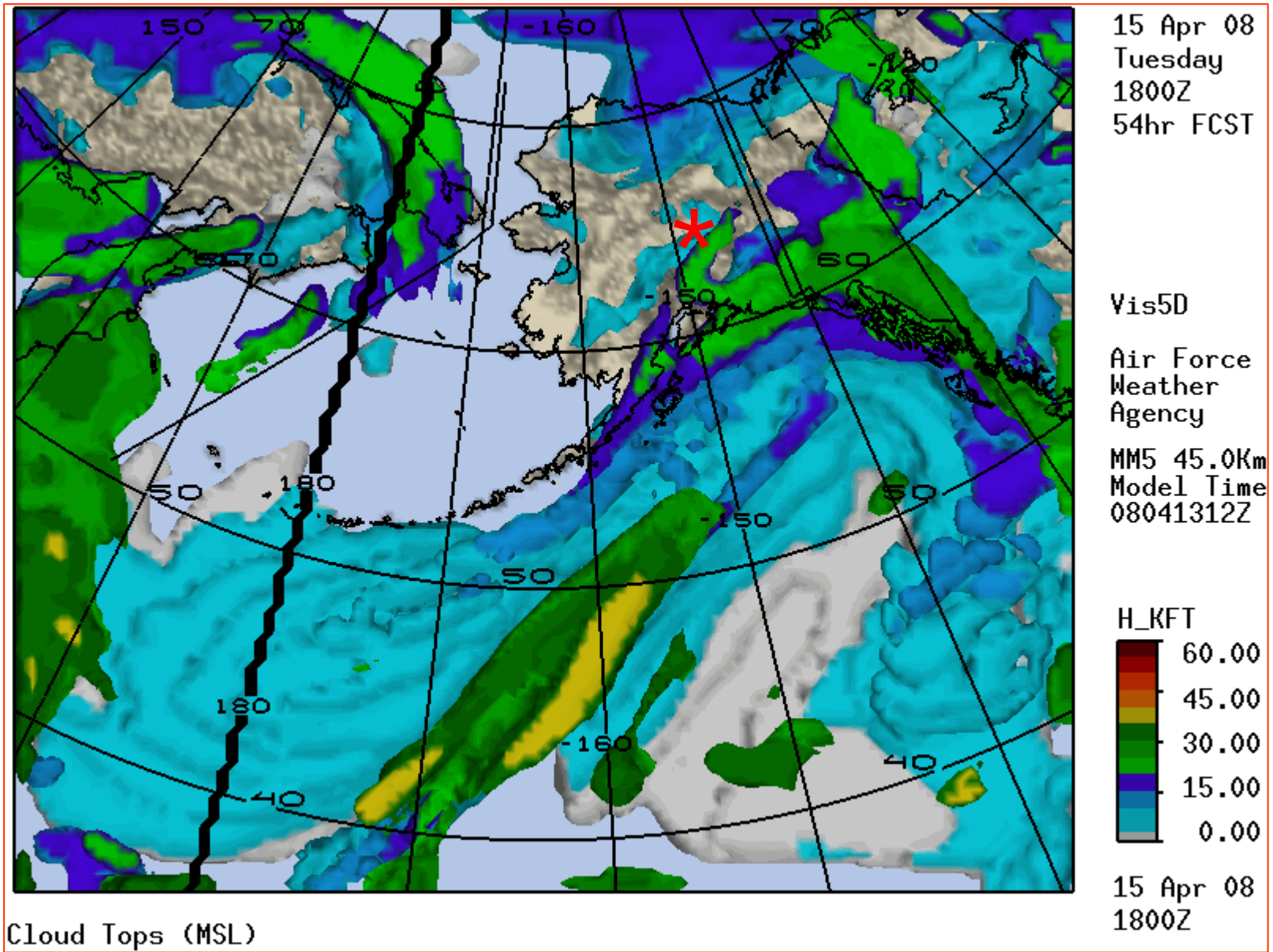


FSU WRF Relative Humidity at 300 hPa Forecast
Valid 1800 Z April 15



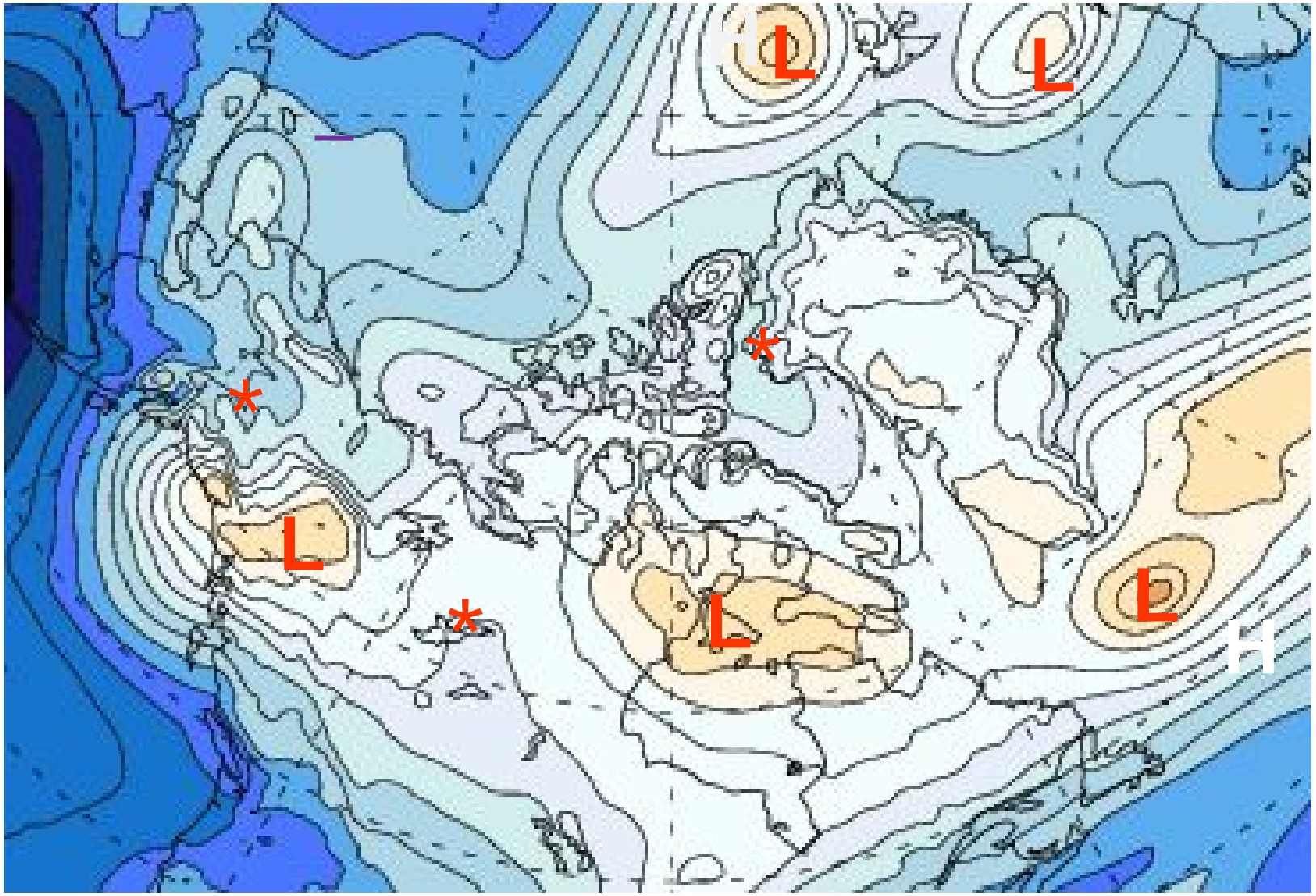
Let's Compare with Air Force Cloud Tops

Valid 1800 Z April 15

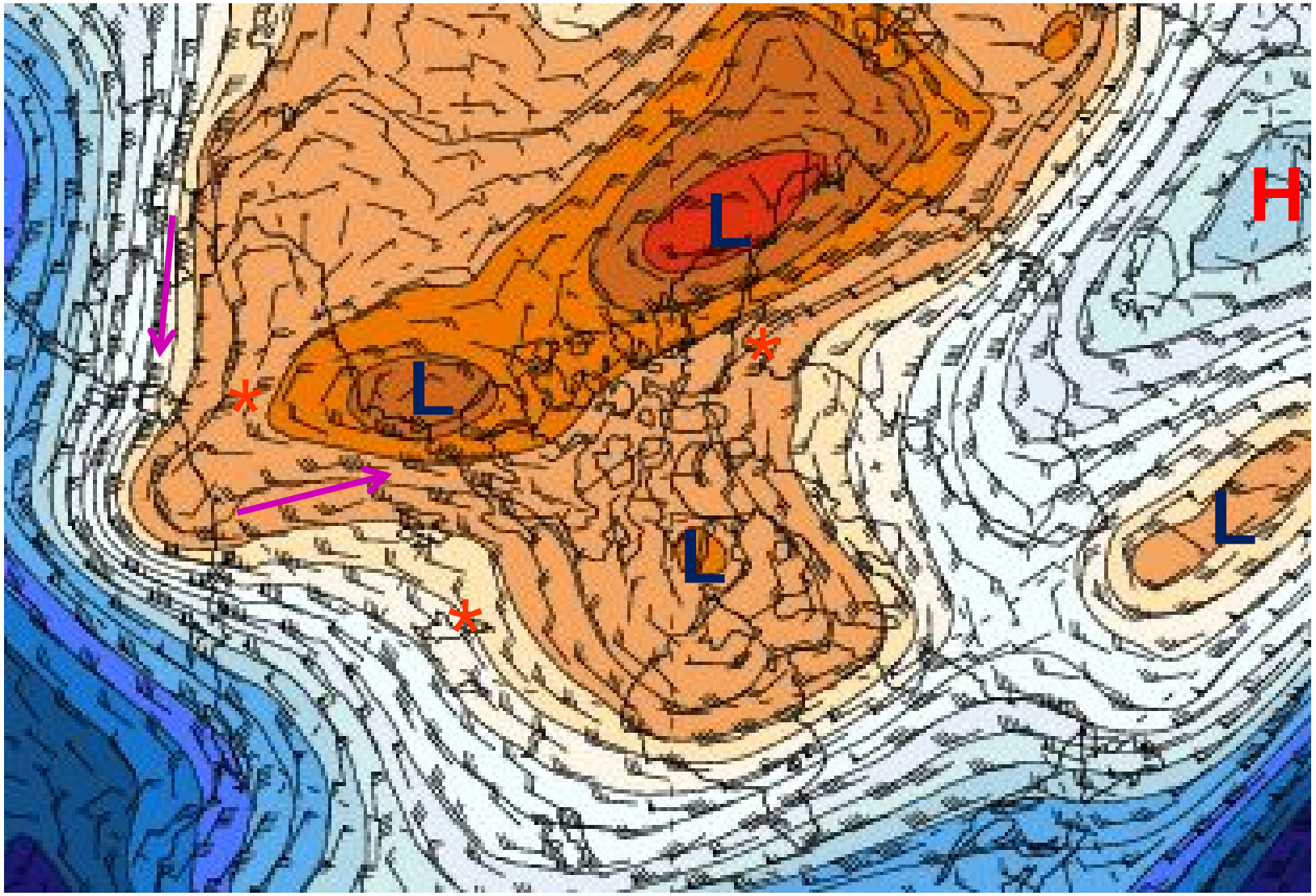


Forecast For Wednesday

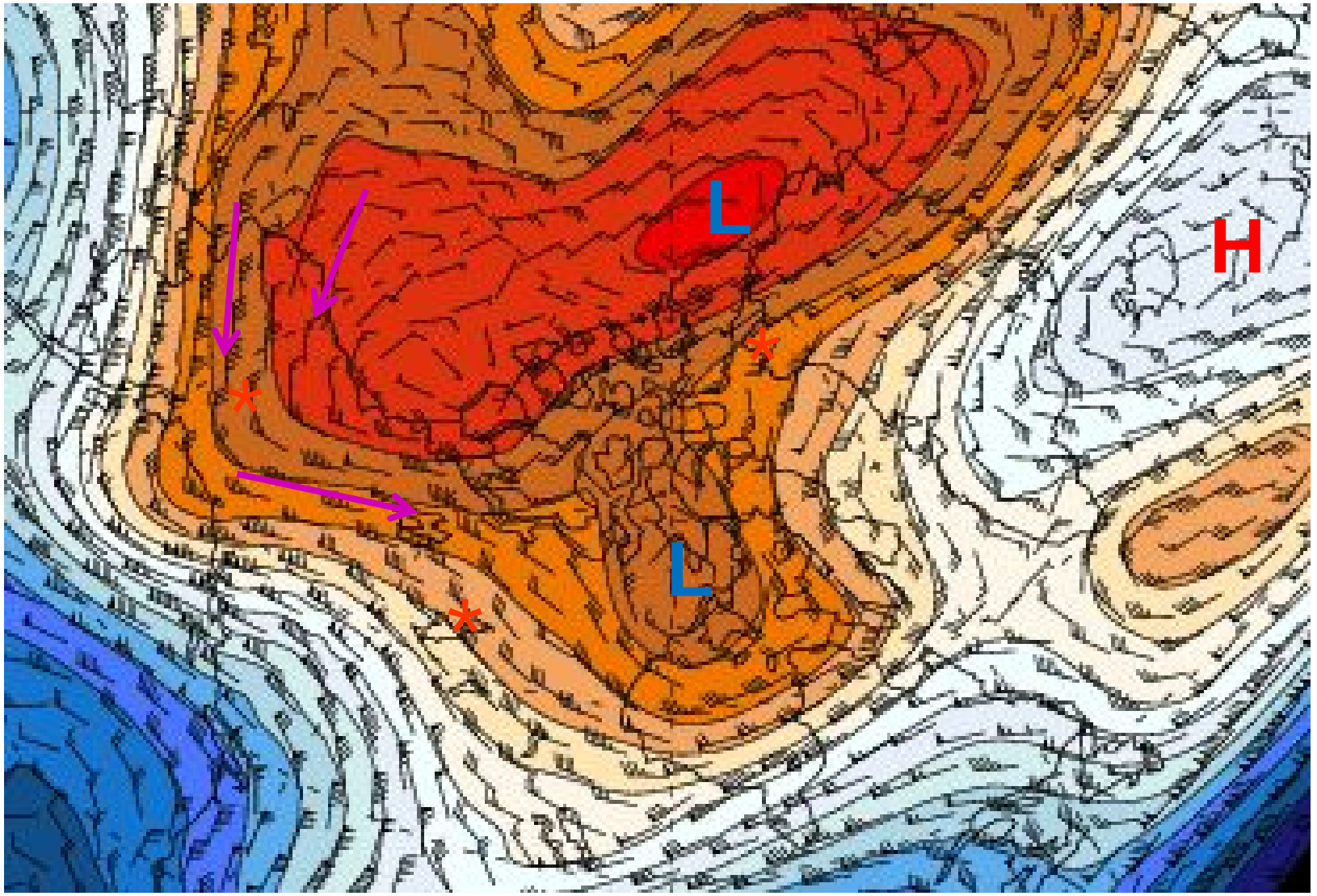
FSU WRF Forecast Valid 1800 Z April 16
Sea Level Pressure



FSU WRF Forecast Valid 1800 Z April 16
500 hPa Heights and Winds

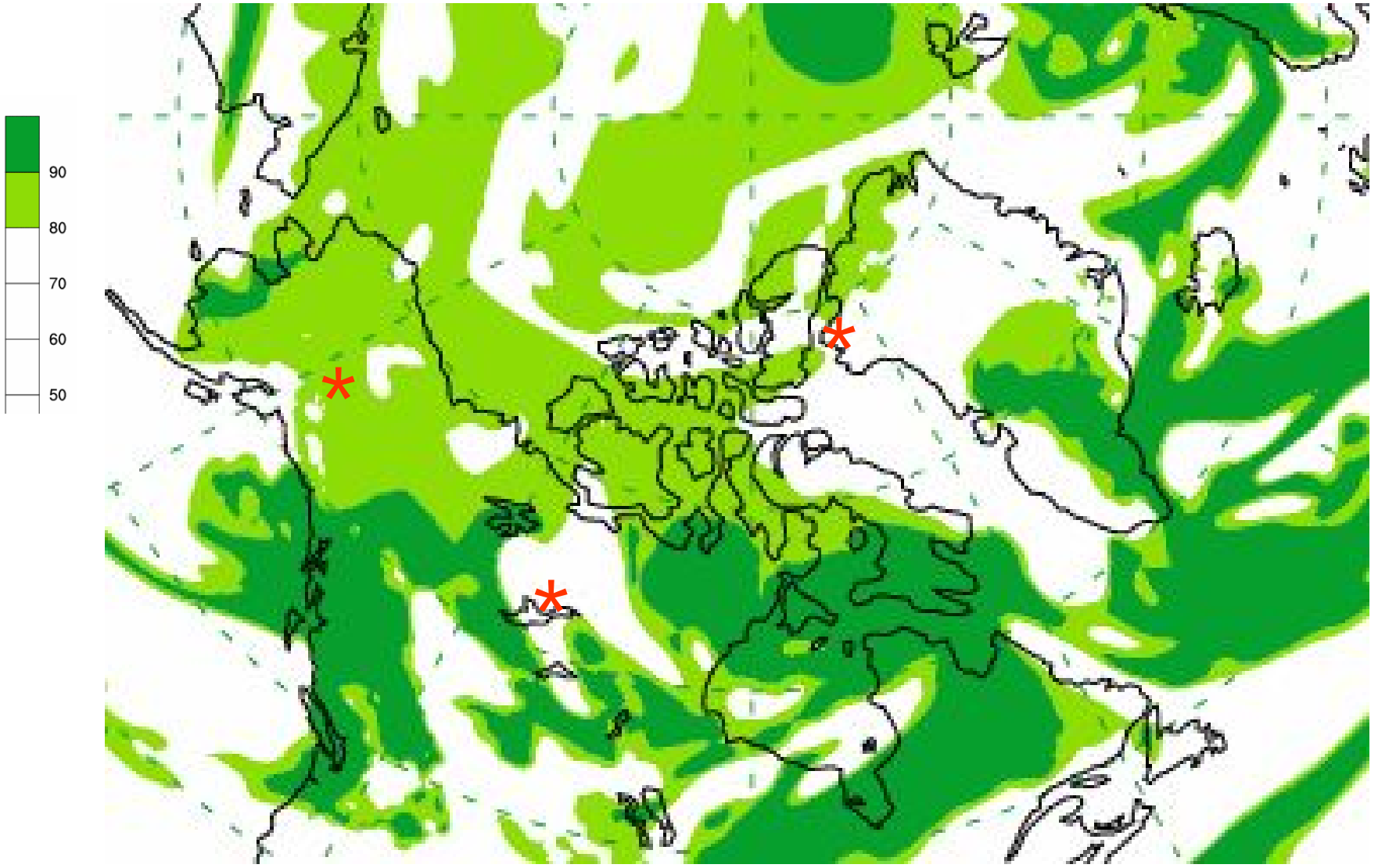


FSU WRF Forecast Valid 1800 Z April 16
300 hPa Heights and Winds

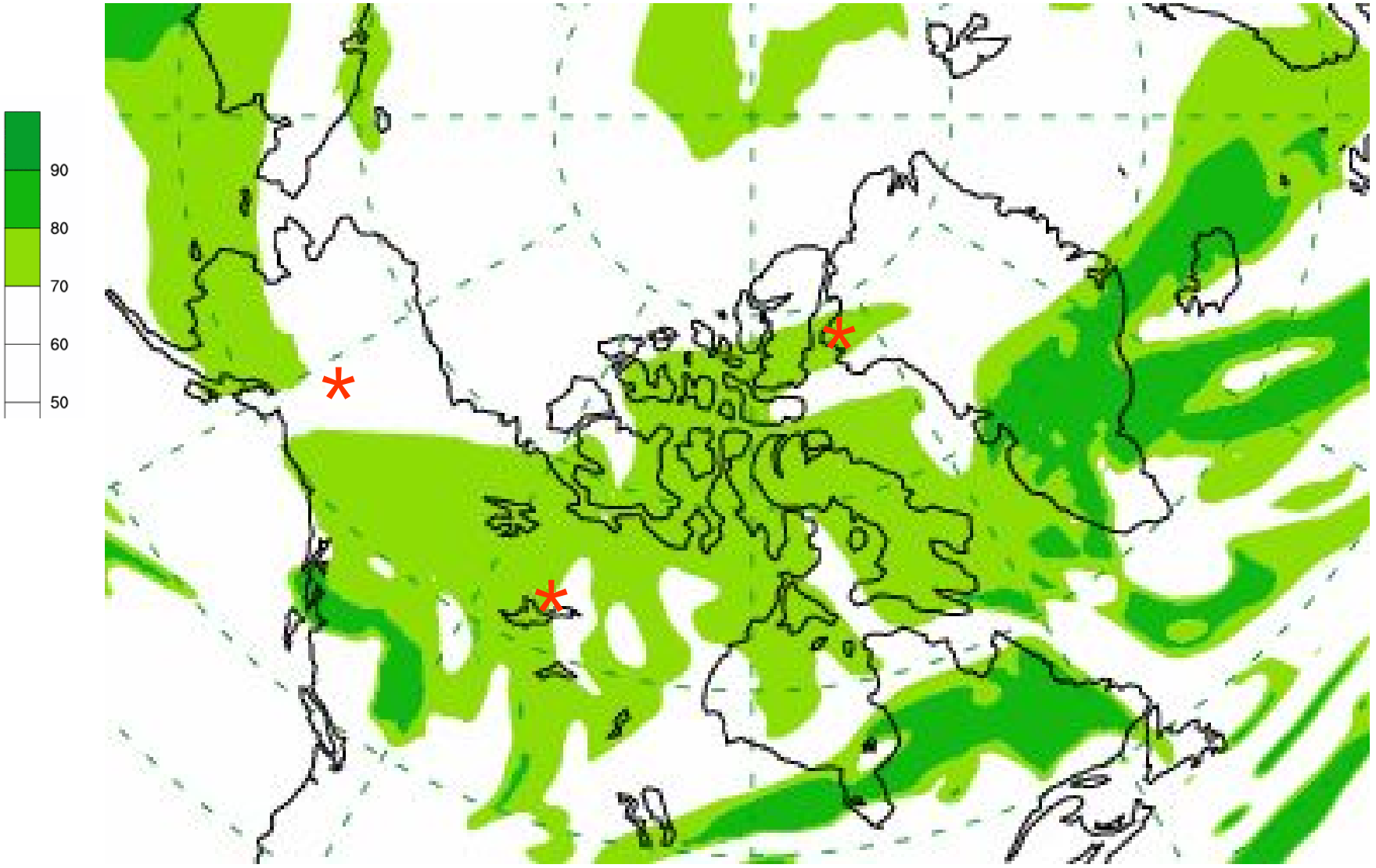


What About Clouds for Wednesday??

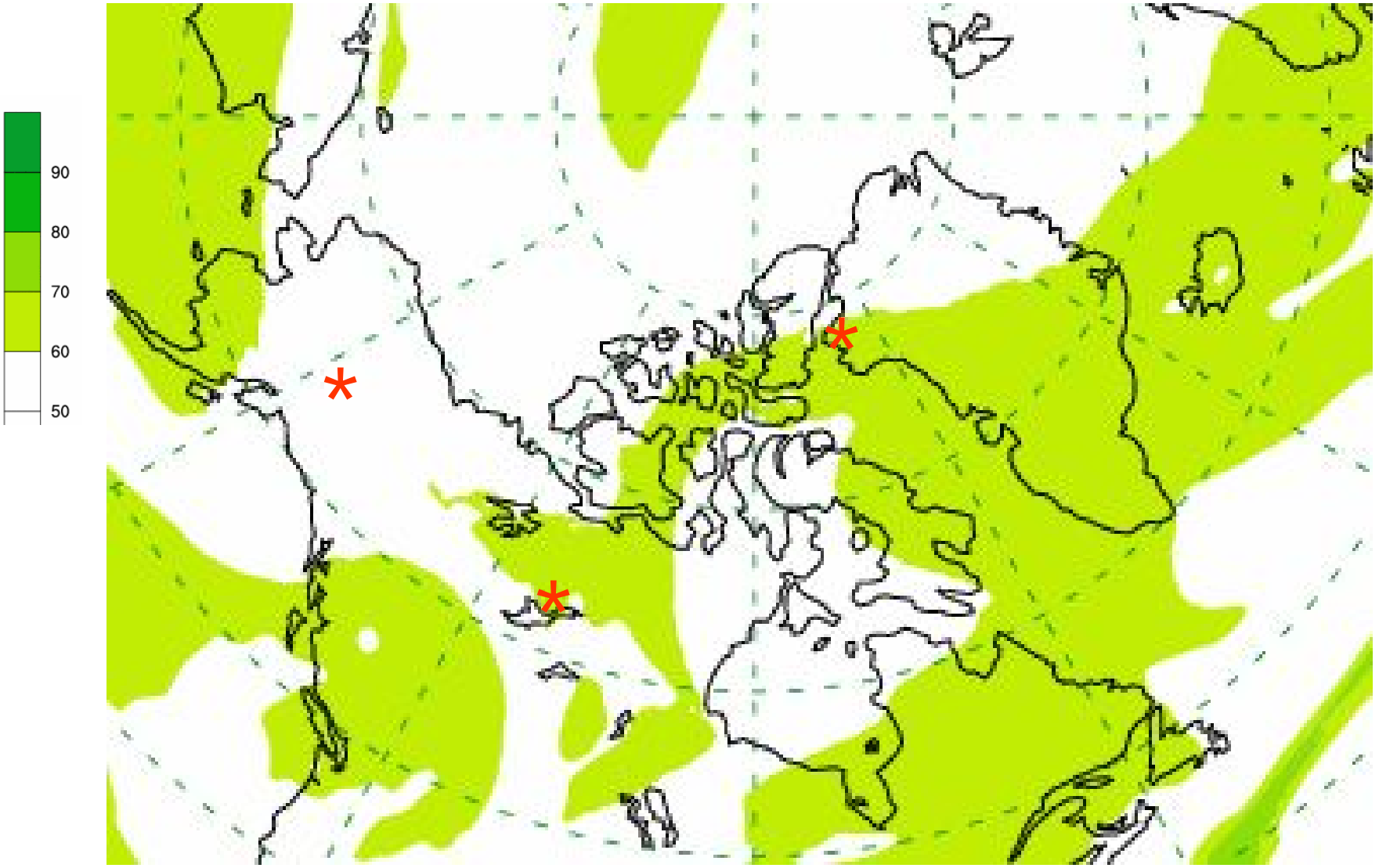
FSU WRF Relative Humidity at 850 hPa Forecast
Valid 1800 Z April 16



FSU WRF Relative Humidity at 500 hPa Forecast
Valid 1800 Z April 16

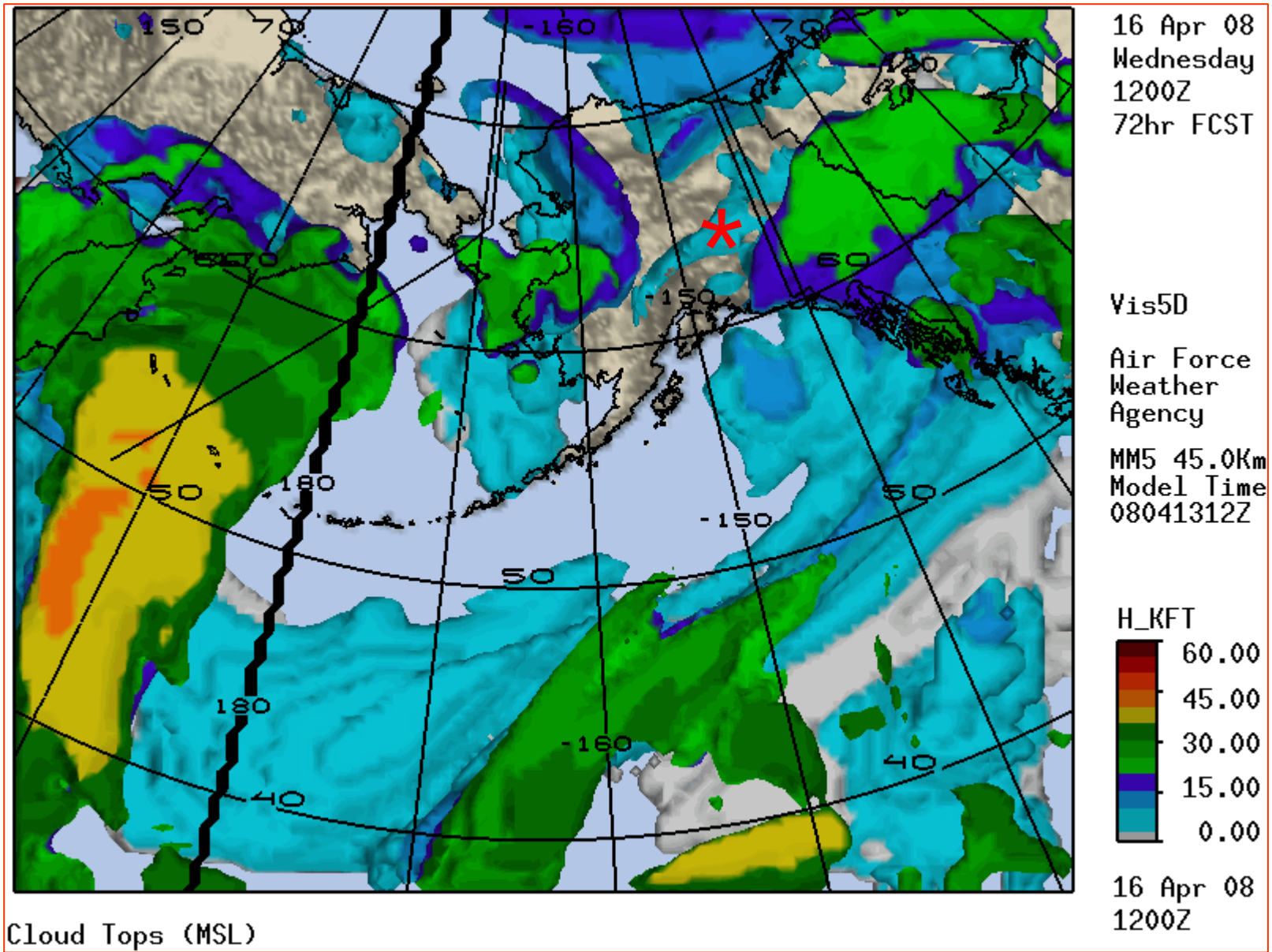


FSU WRF Relative Humidity at 300 hPa Forecast
Valid 1800 Z April 16



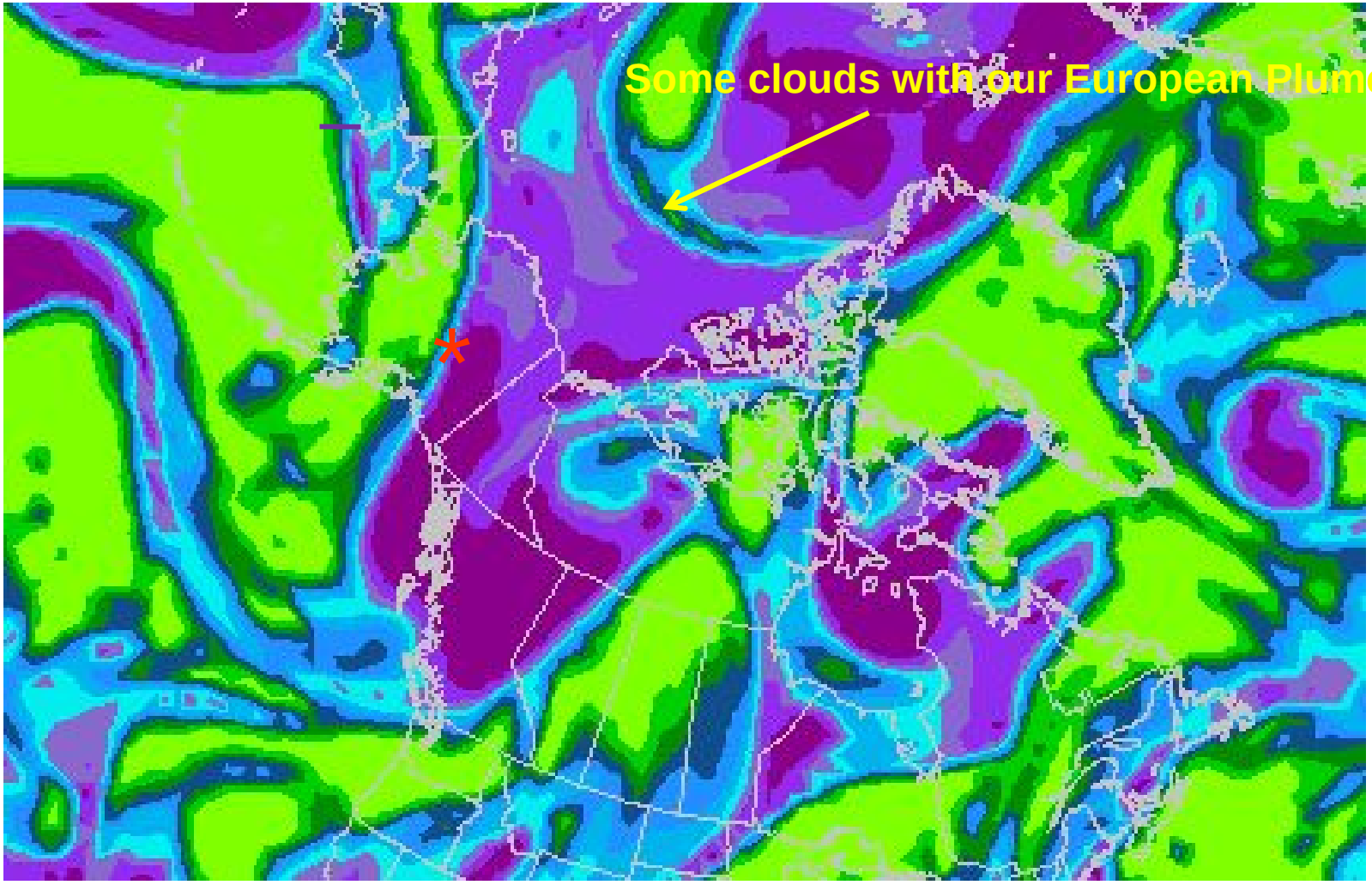
Let's Compare with Air Force Cloud Tops

Valid 1200 Z April 16

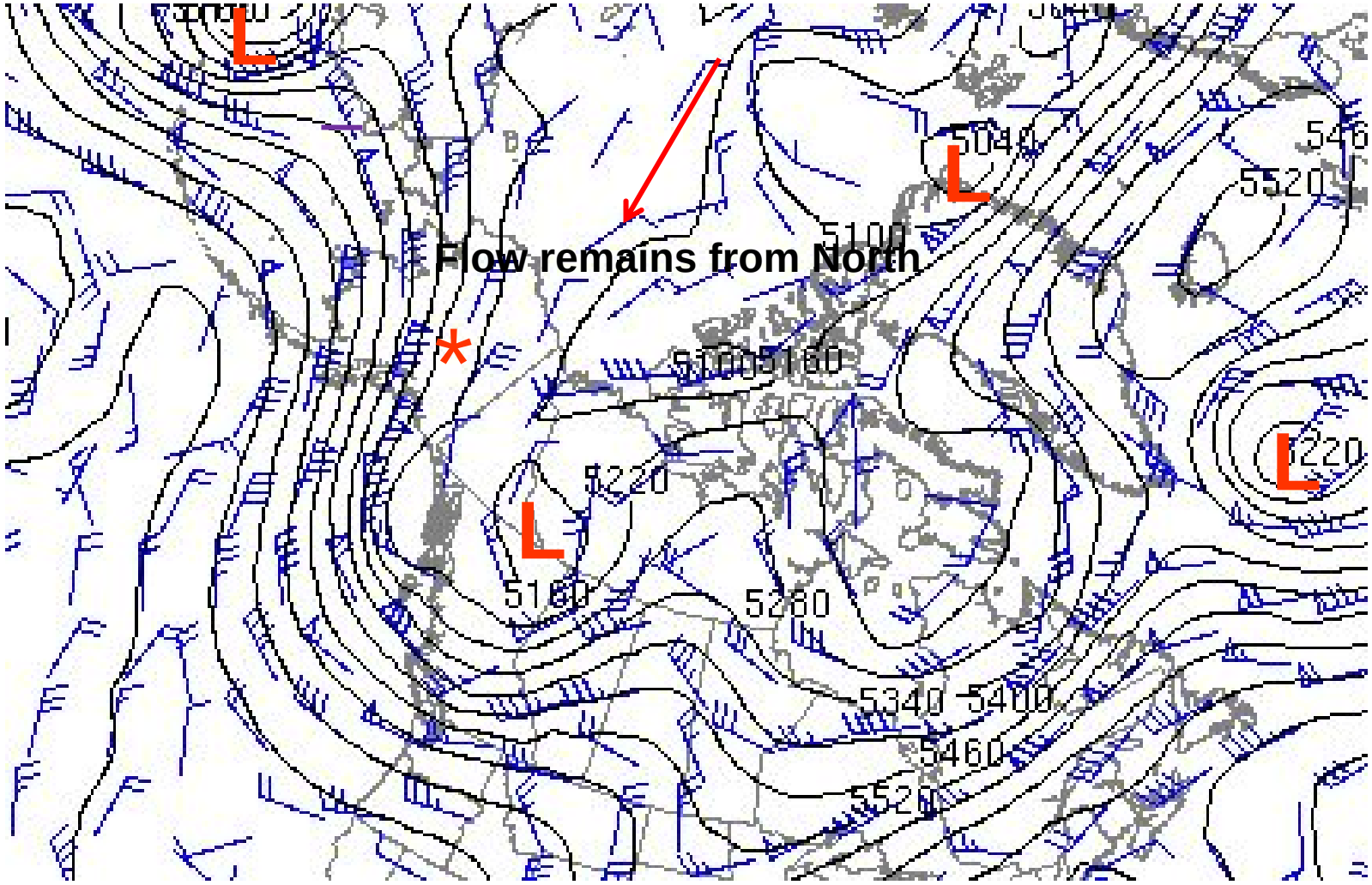


A quick look at Thursday.

RH at 300 hPa
Thursday at 18 Z



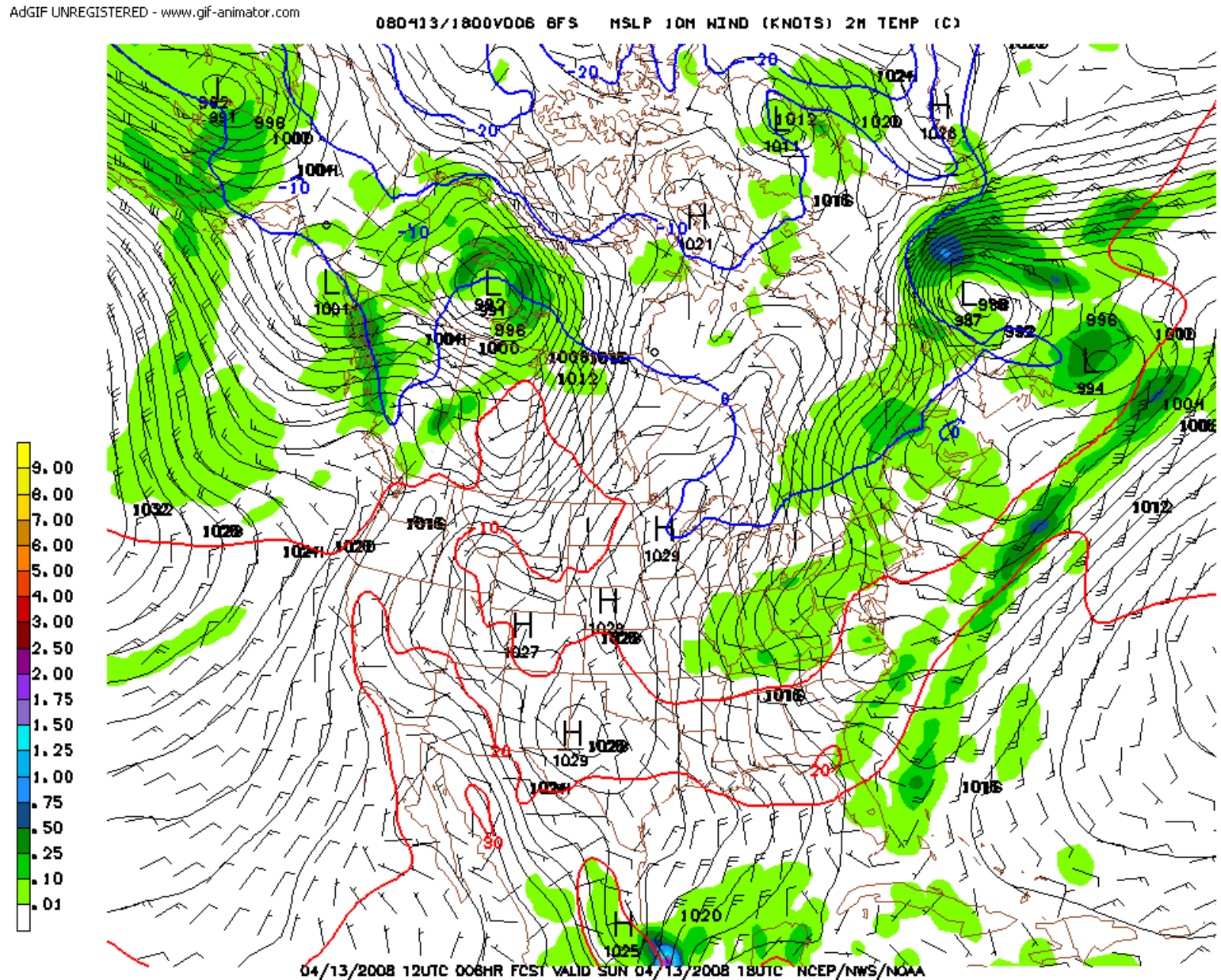
500 hPa Heights and Winds
18 Z Thursday



GFS 120 hour loop

- 10 m winds, 6 h precip. Sea Level Pressure
- Loop starts at 18 Z April 13
- Loop ends at 12 Z April 18

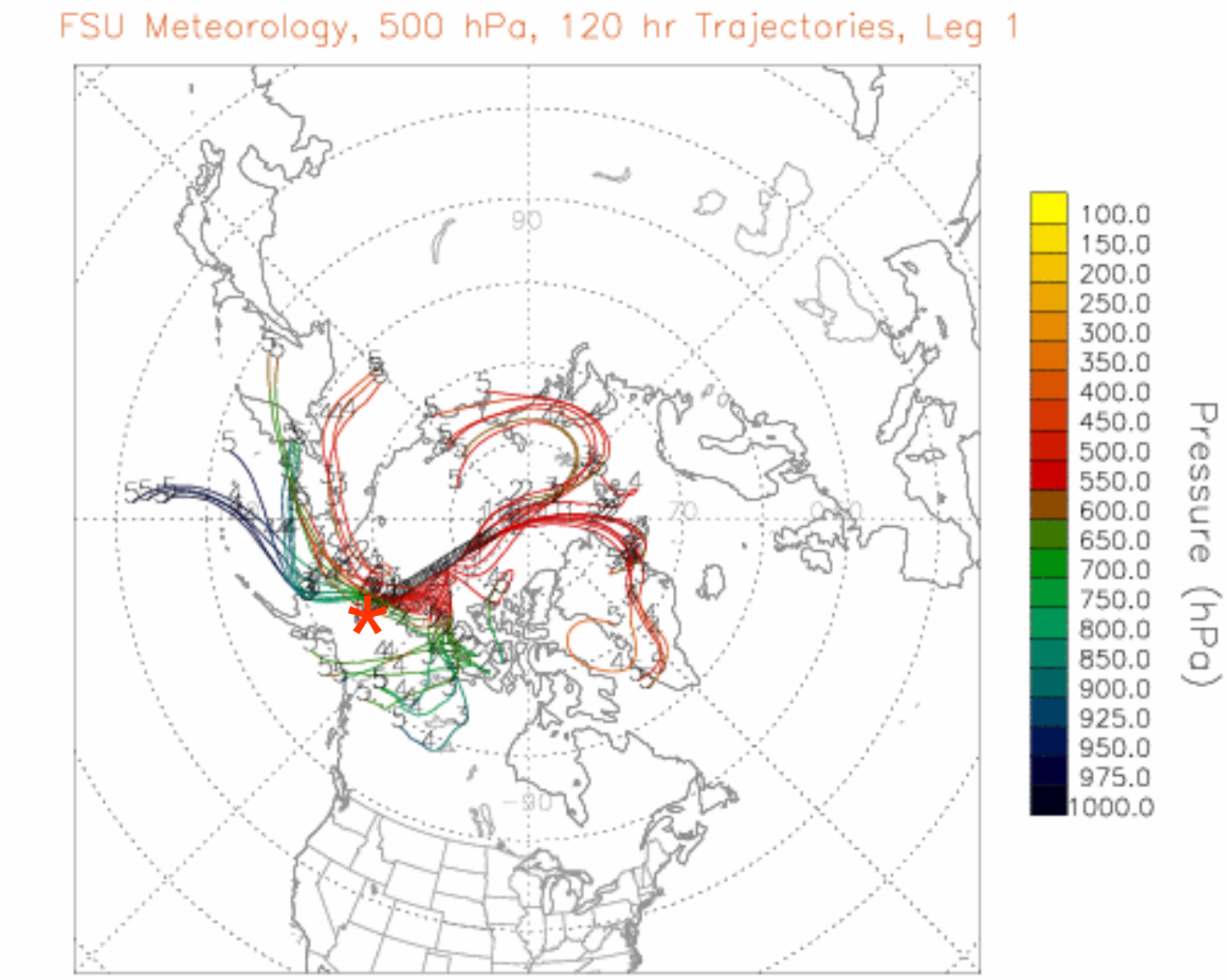
GFS Forecast next 120 hours 10 m winds, 6 h precip. Sea Level Pressure



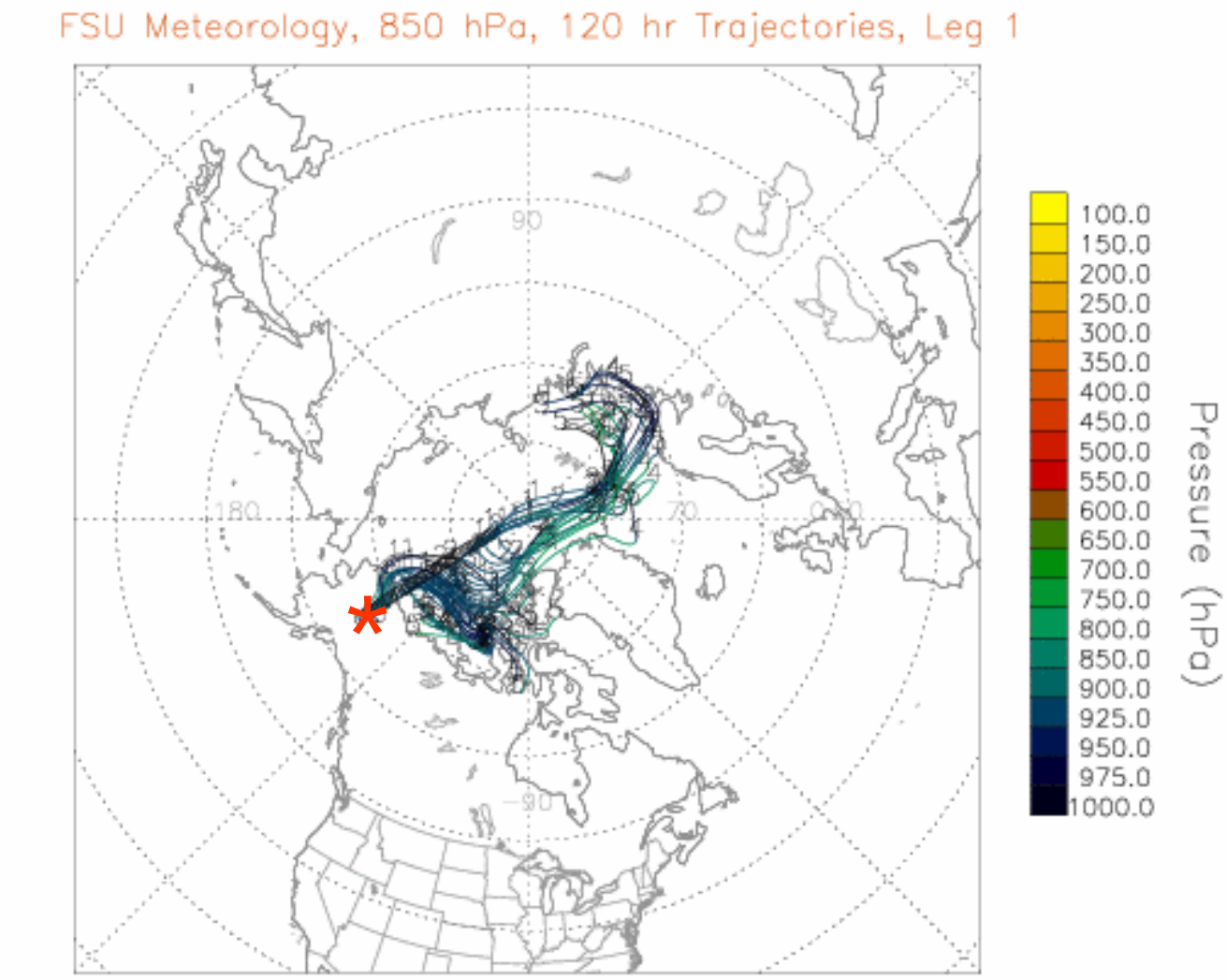
FSU Trajectories for late Tuesday

- Met data from FSU WRF run (25 km grid)
- 5 days backwards in time
- Color coded by altitude
- Run for 06 Z Wednesday--halfway

FSU 5 Day Backward Trajectories from 500 hPa



FSU 5 Day Backward Trajectories from 850 hPa



FSU Runs Flexpart

- Met data from FSU WRF run (25 km grid)
- Top 10% of emissions are tracked
- 7 day runs through fly day (Ending 10 am ADT April 16)
- Color coded by concentration
- Fire Data Not Included

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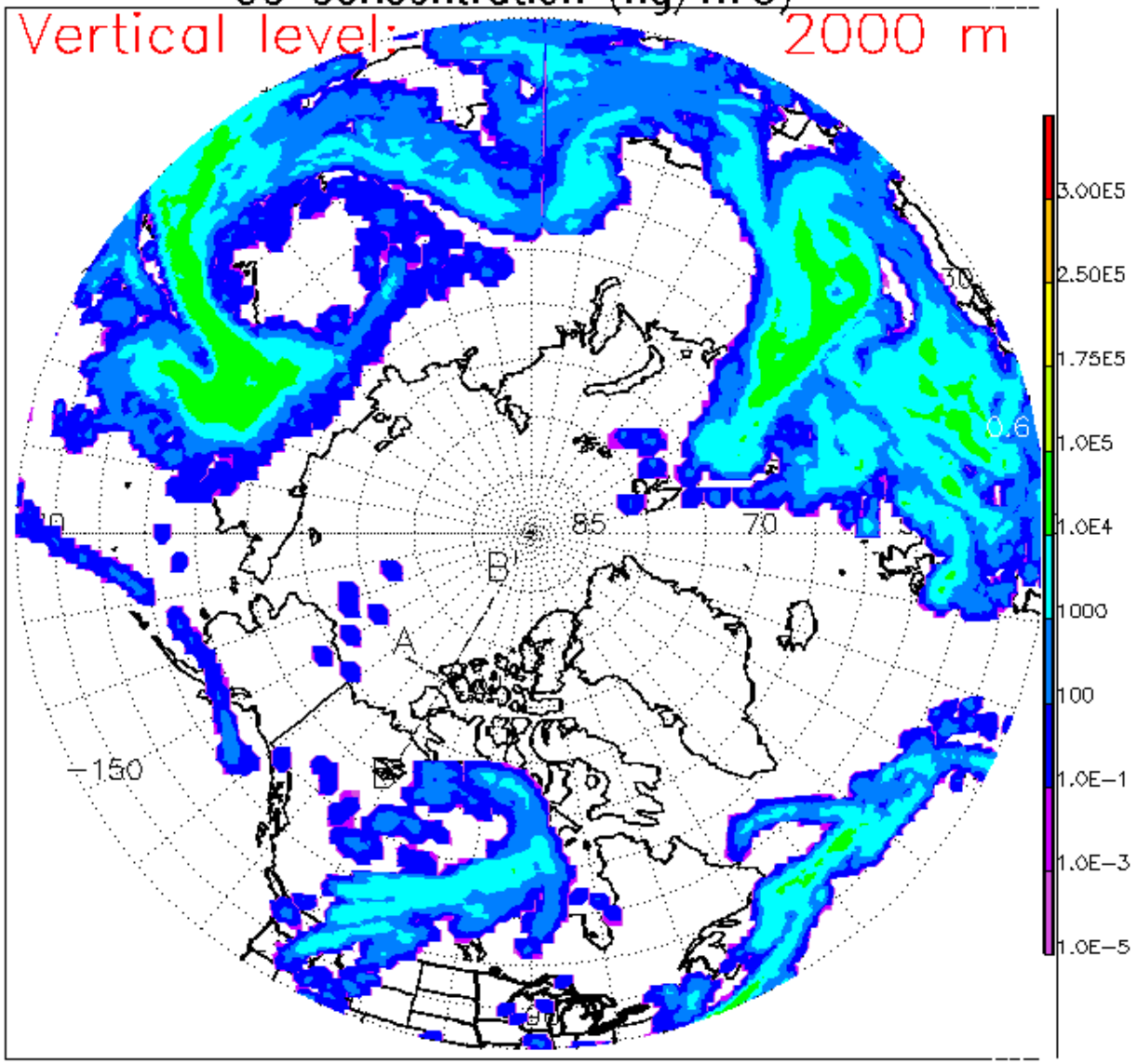
1800 April 14, 2008

CO Concentration (ng/m^3)



Florida State University Meteorology

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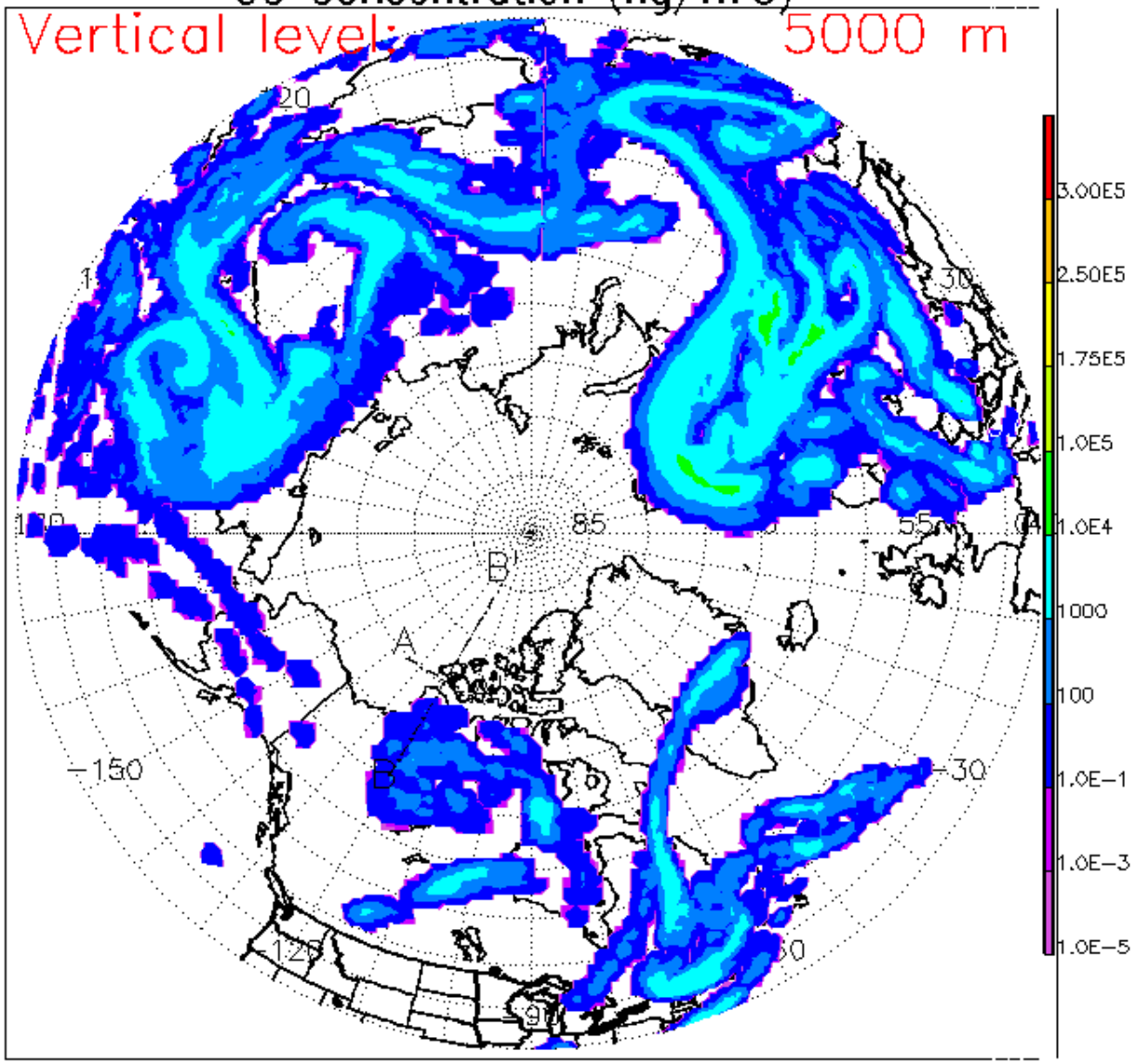
1800 April 14, 2008

CO Concentration (ng/m^3)



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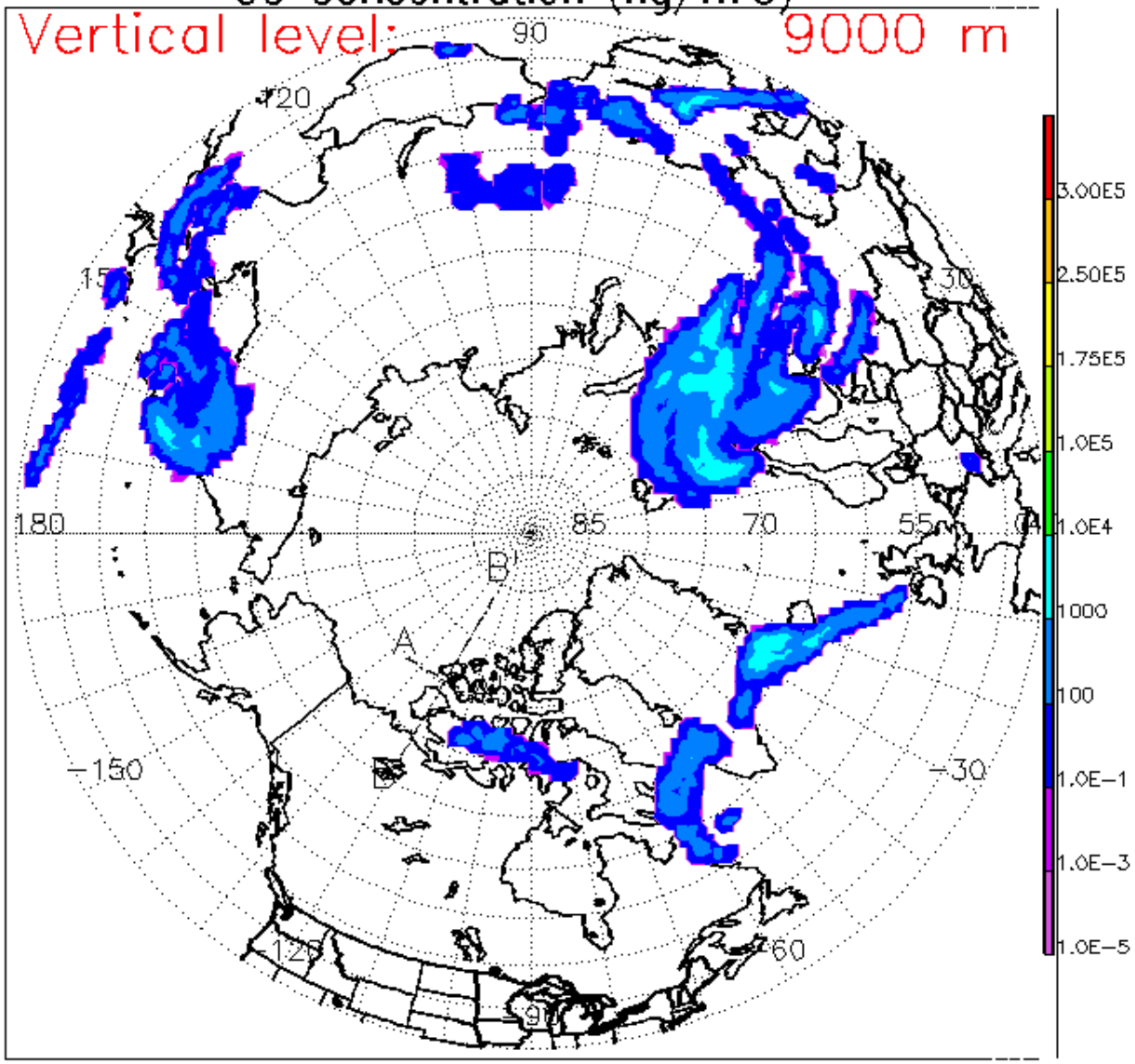
1800 April 14, 2008

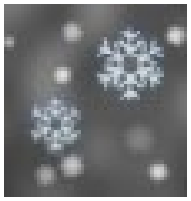
CO Concentration (ng/m^3)



Florida State University Meteorology

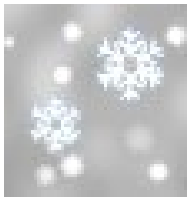
Fairbanks AK Forecast

Tonight



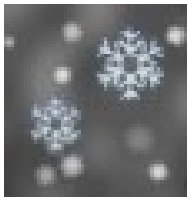
1 – 3 inches of Snow Likely
Lo: 18F

Monday



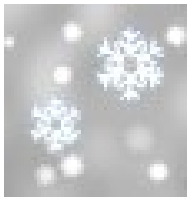
2 inches of Snow Likely
Hi: 30F

Mon. Night



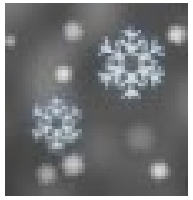
Chance of Snow
Lo: 15F

Tuesday



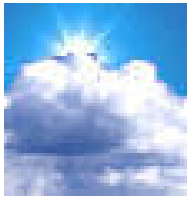
Chance of Snow and *COLD*
Hi: 25F

Tue. Night



Chance of Snow
Lo: 10F

Wednesday

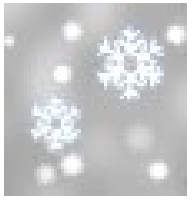


Mostly Cloudy
Hi: 25F

Wed. Night

Mostly Cloudy
Lo: 10F

Thursday



Chance of Snow
Hi: 30F

Thu. Night

Mostly Cloudy
Lo: 10

AVERAGES Hi: 41 Low: 18