

# **Geography 416-310 General Climatology**

## **Map Supplement**

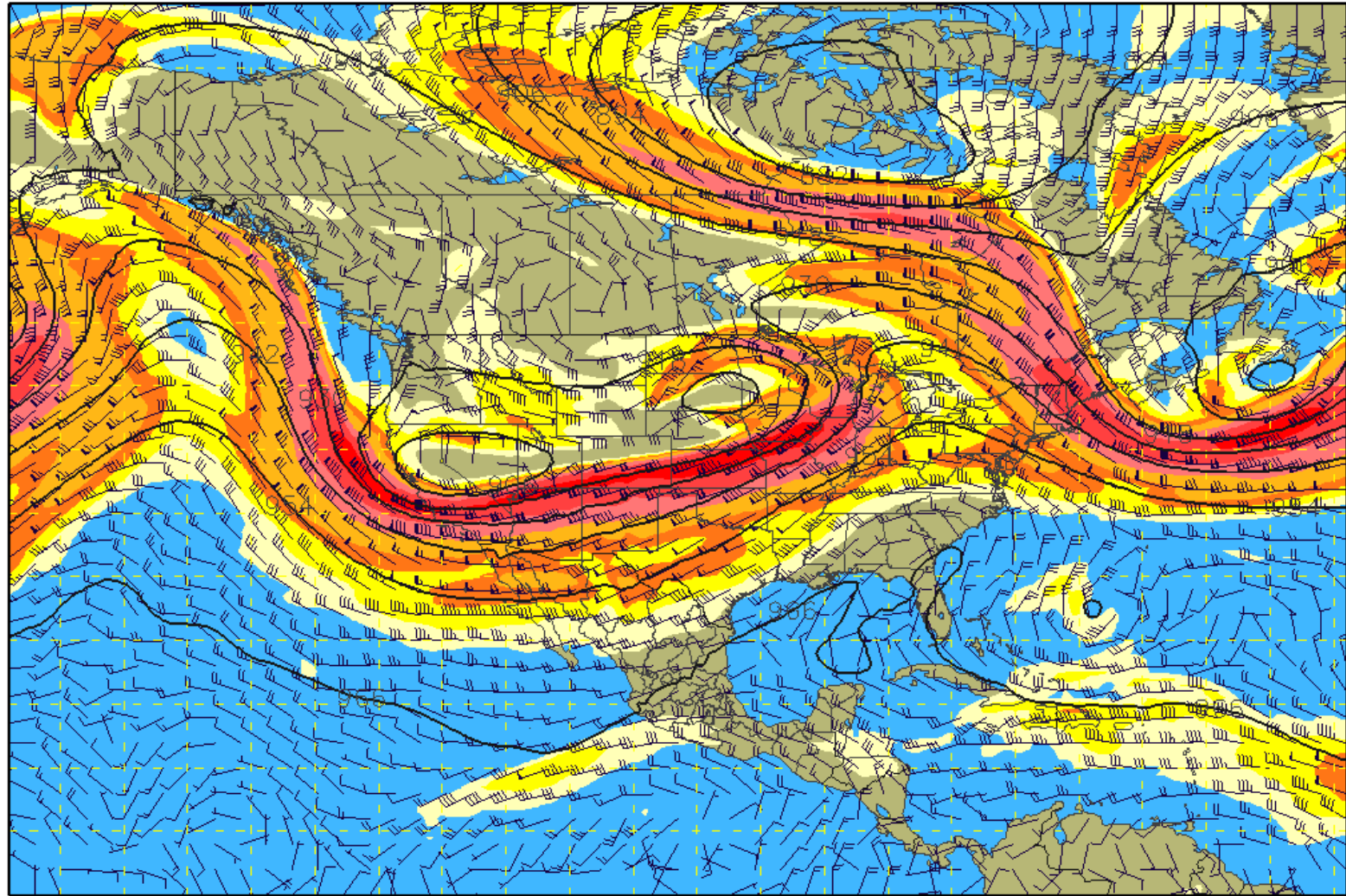
Prof. Mark D. Schwartz

*Fall 2022*

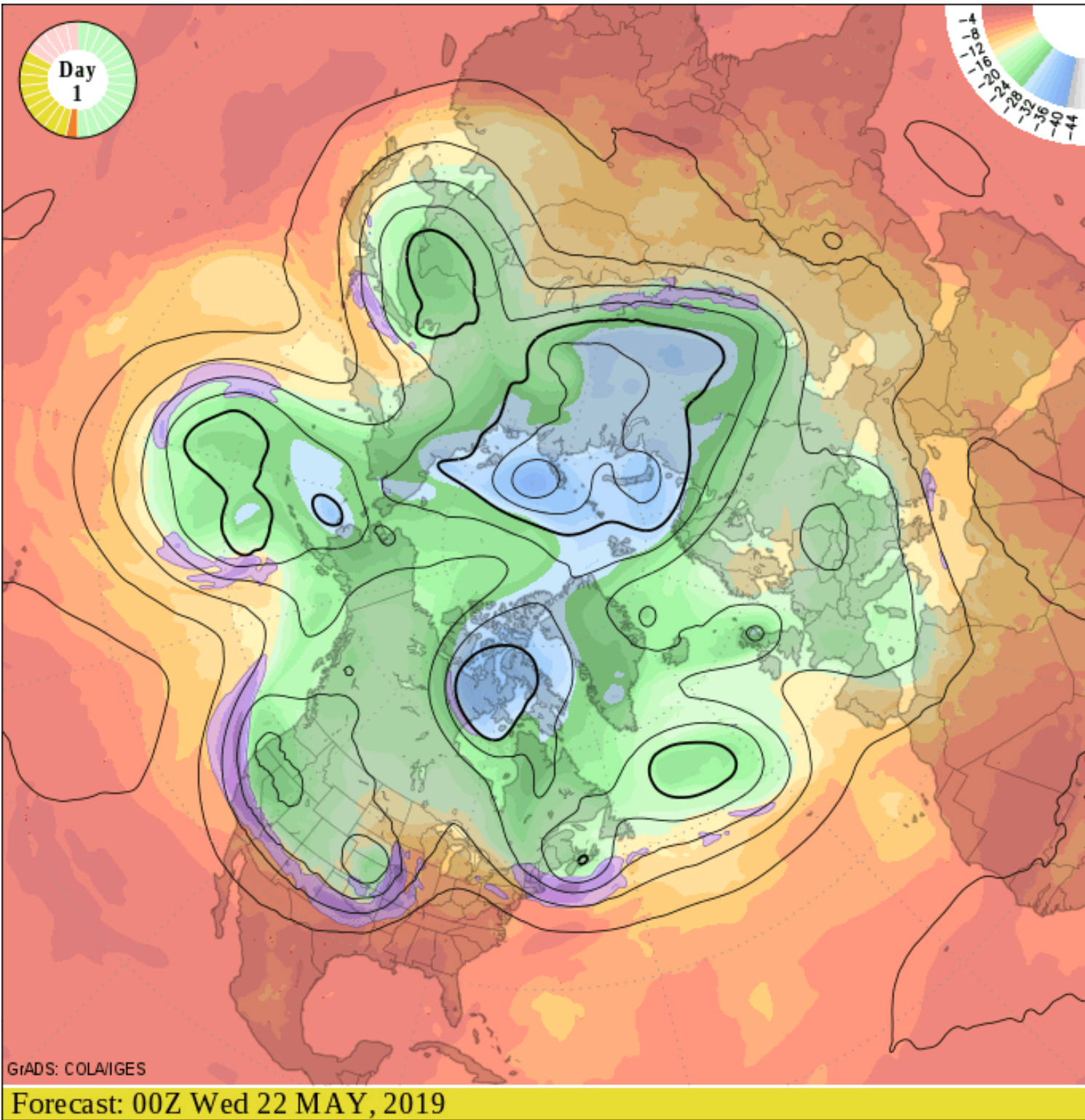
# 300 mb Heights (dm) / Isotachs (knots)

12-hour forecast valid 1200 UTC Wed 22 May 2019

GFS (00z 22 May)



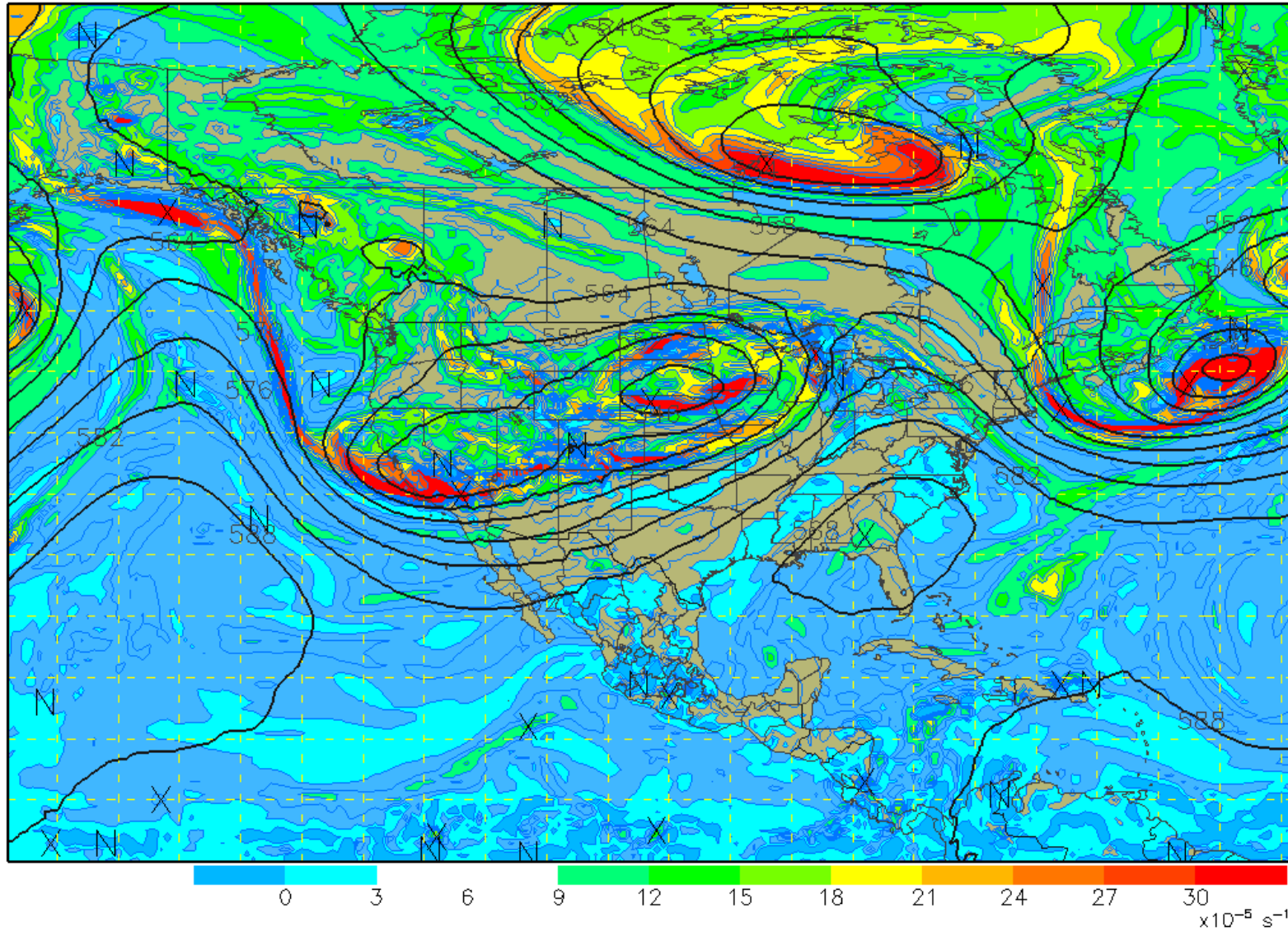
30 40 50 60 80 100 125 150 knots



# 500 mb Heights (dm) / Abs. Vorticity ( $\times 10^{-5} \text{ s}^{-1}$ )

12-hour forecast valid 1200 UTC Wed 22 May 2019

GFS (00z 22 May)

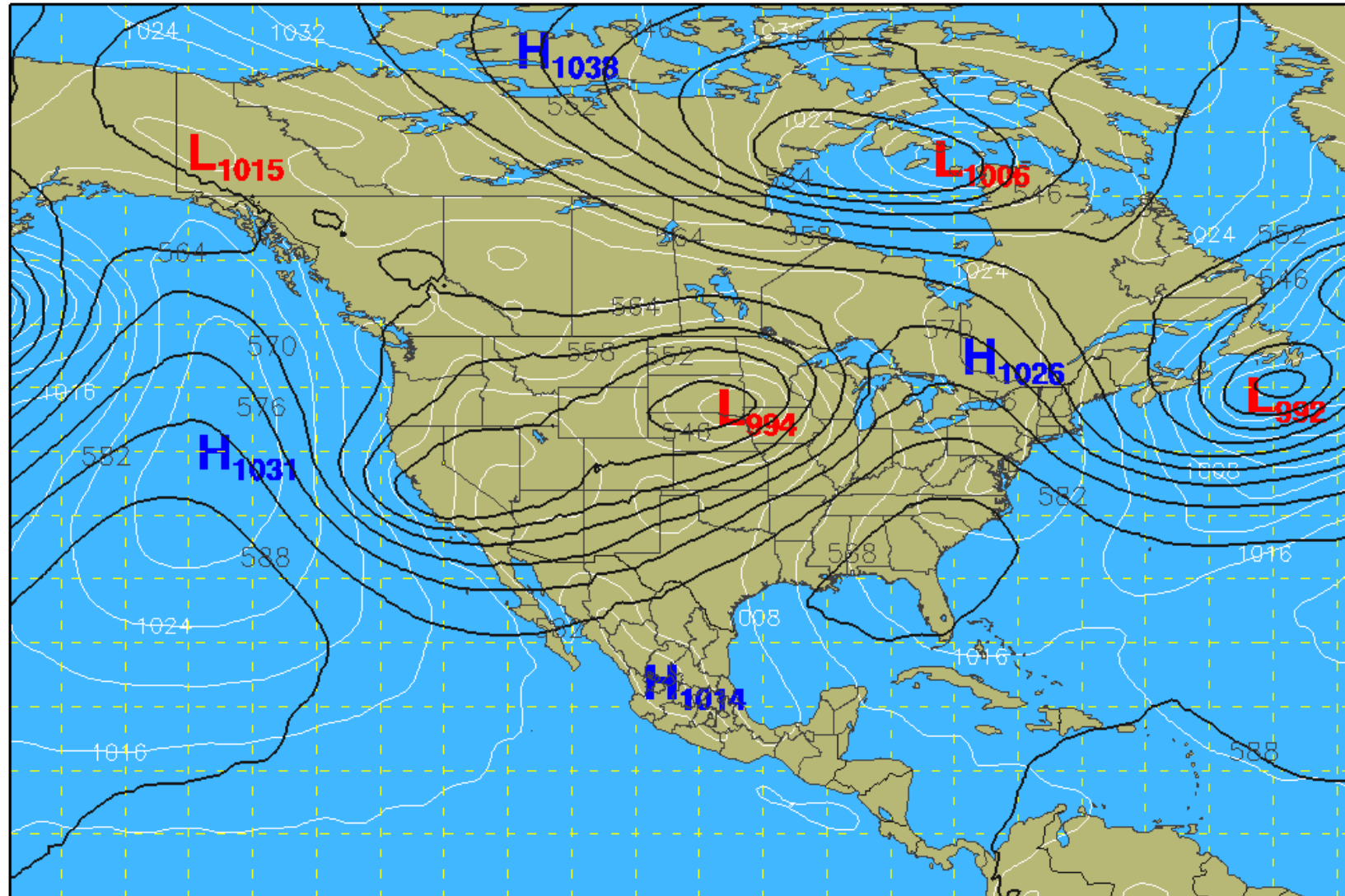


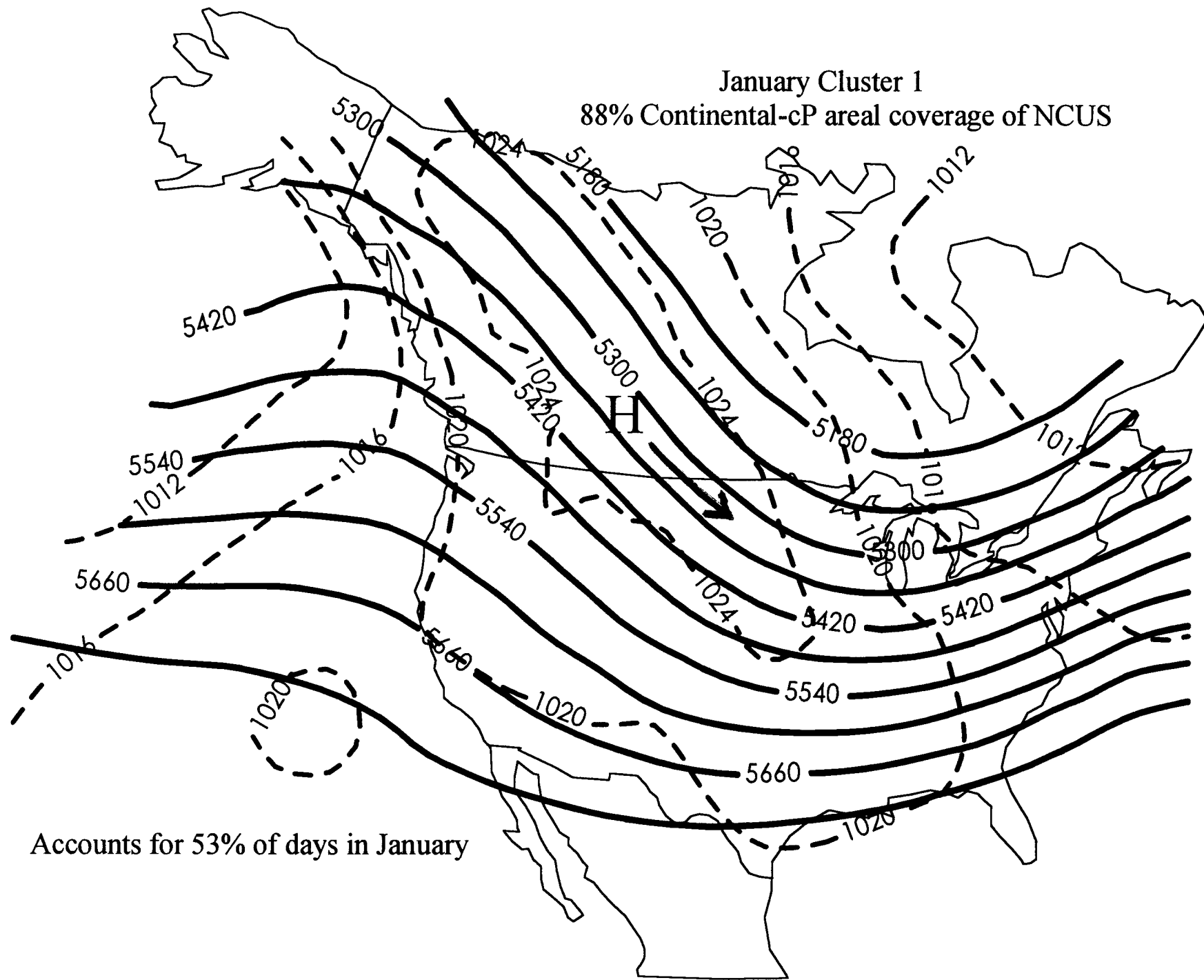


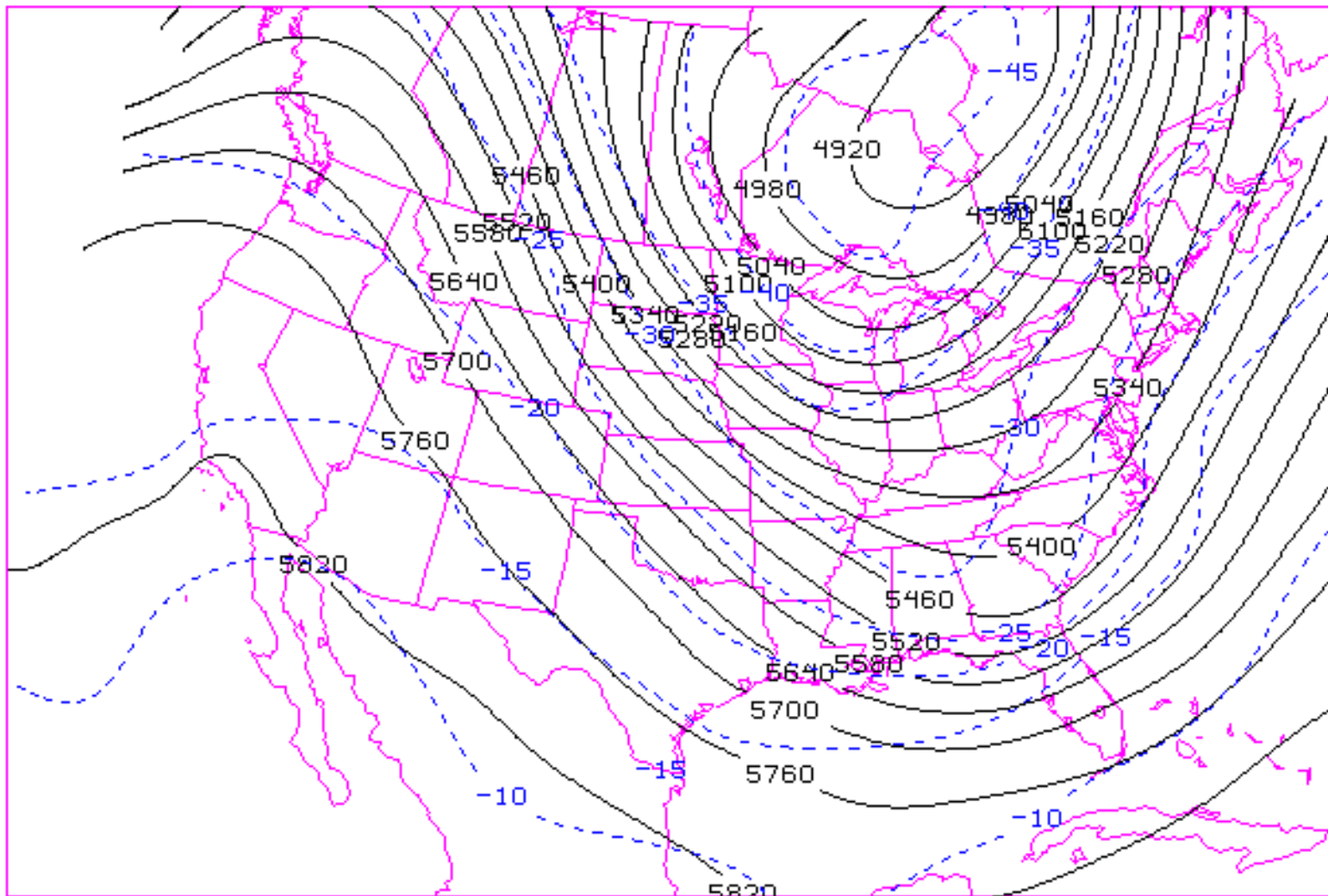
# MSLP (mb) / 500 mb Heights (dm)

12-hour forecast valid 1200 UTC Wed 22 May 2019

GFS (00z 22 May)

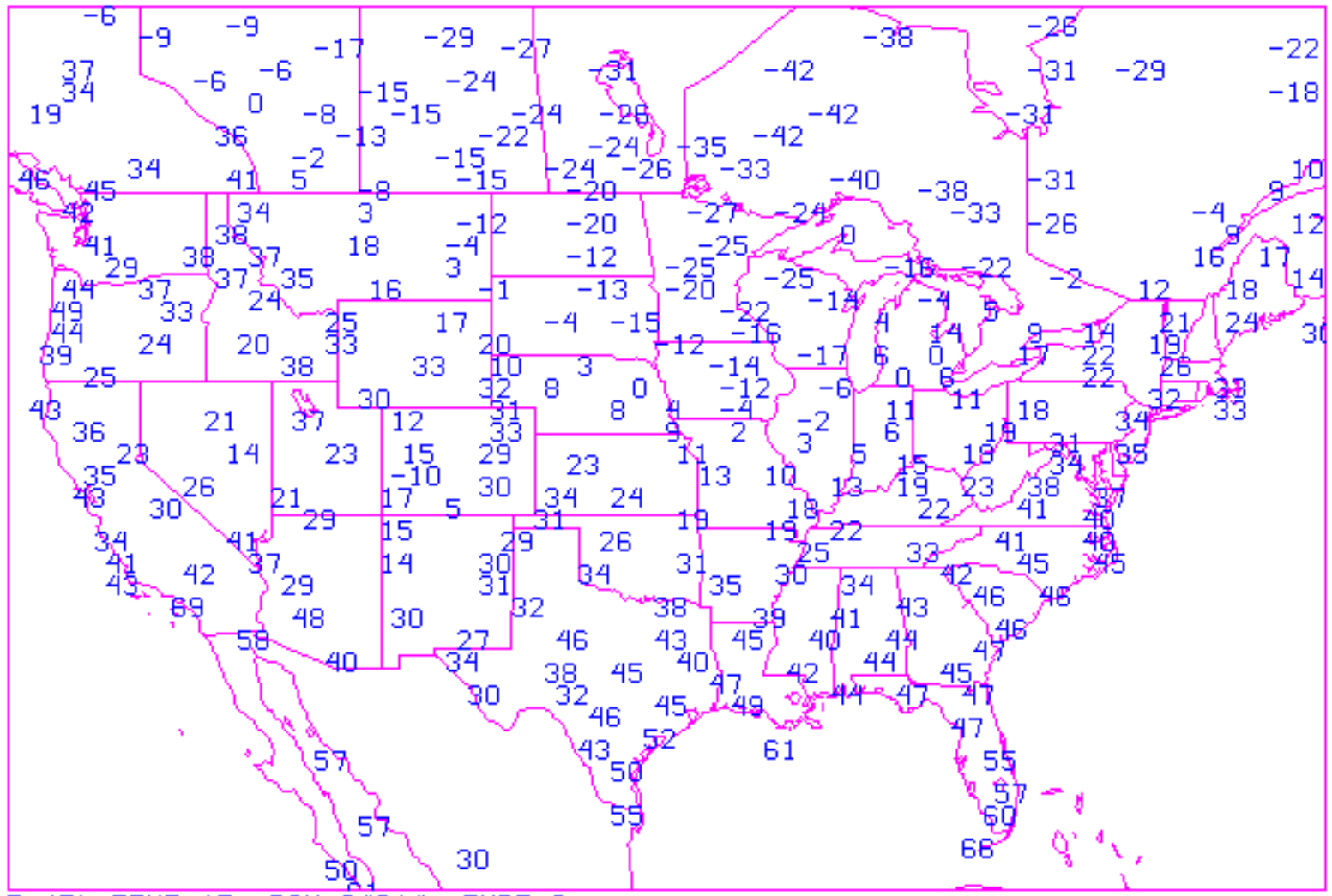






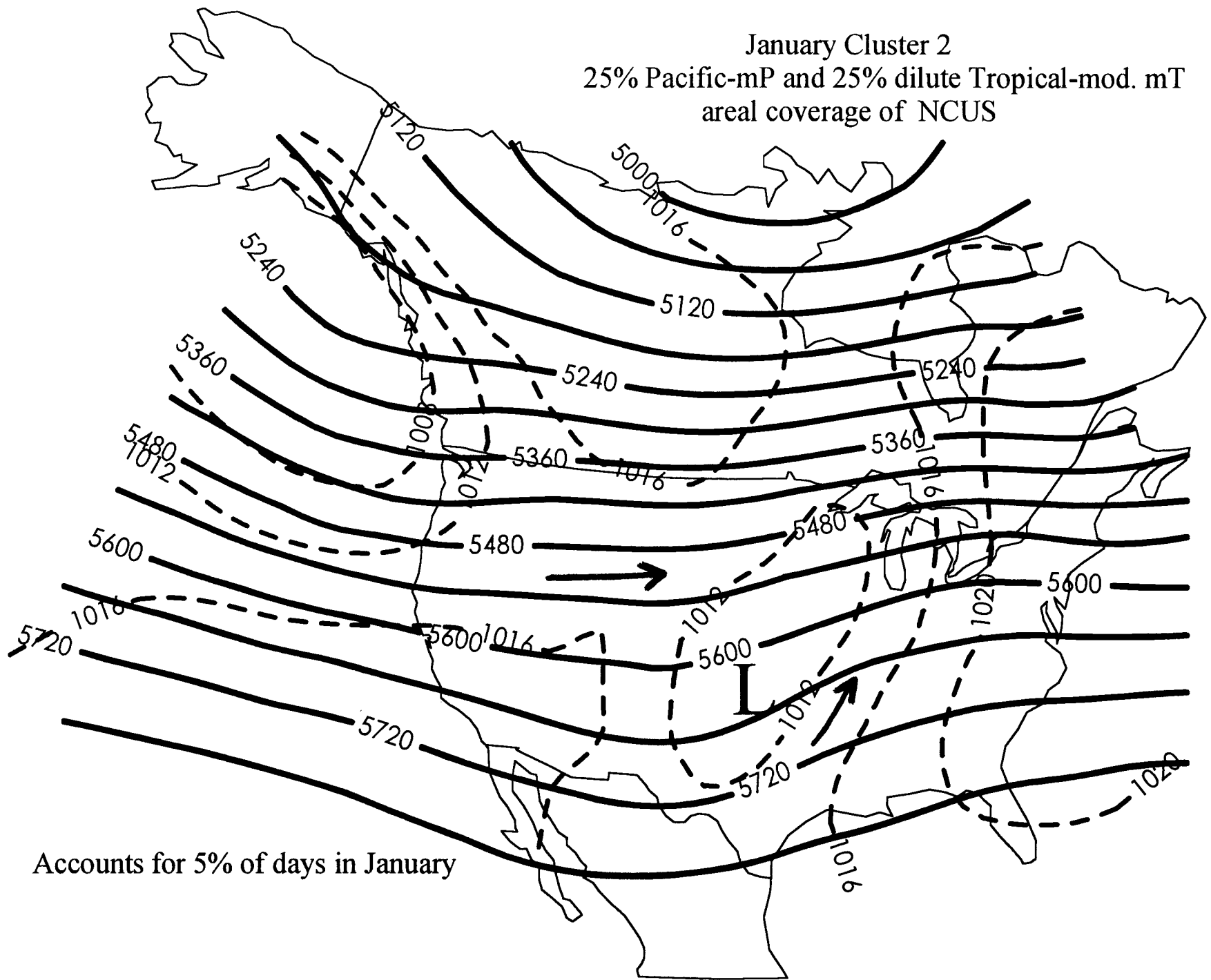
Z (GPM) TIME 0 DAY 94014 500 MB VALID 94014/12Z  
 T (C) TIME 0 DAY 94014 500 MB VALID 94014/12Z



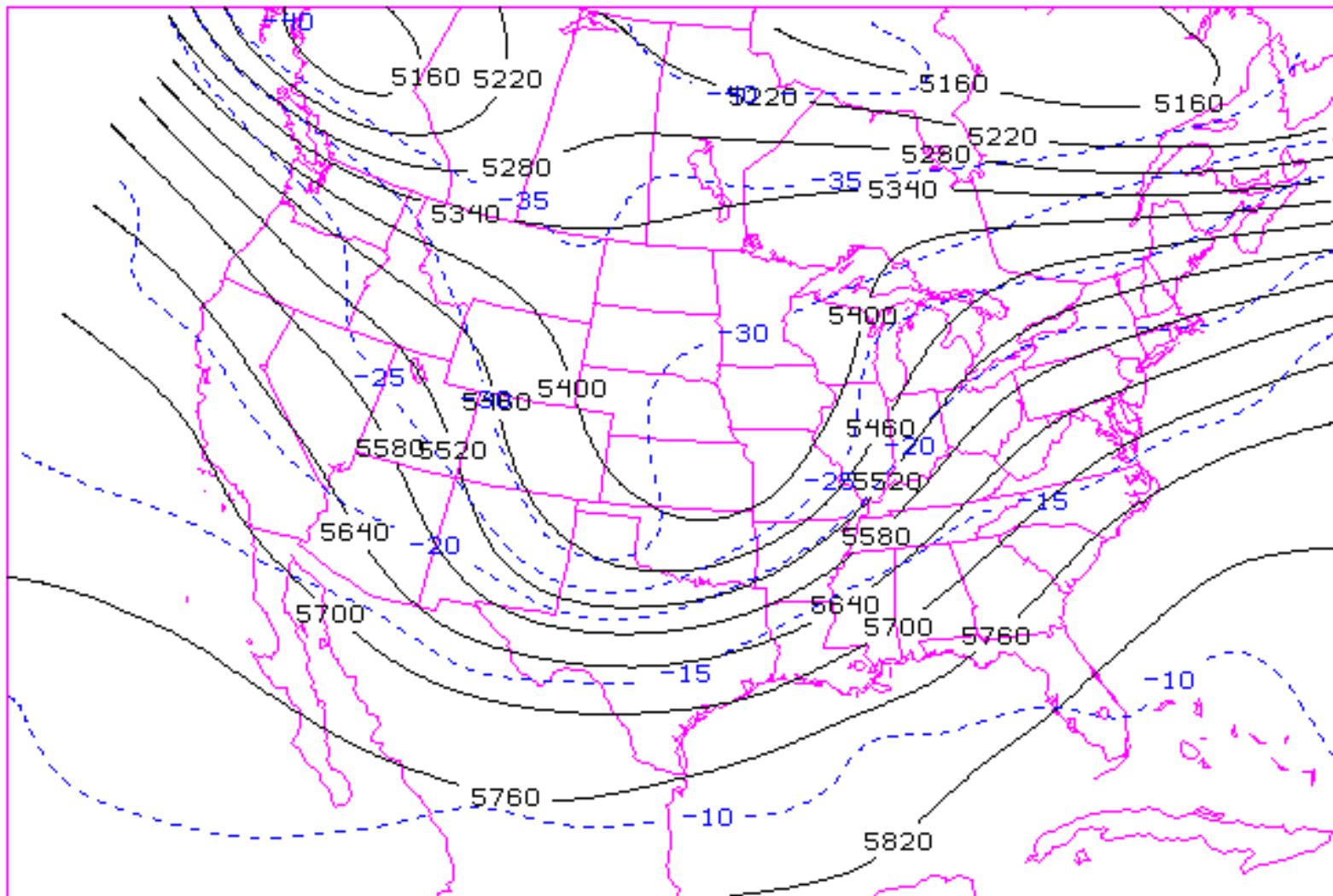


T (F) TIME 15. DAY 94014. TYPE 0.

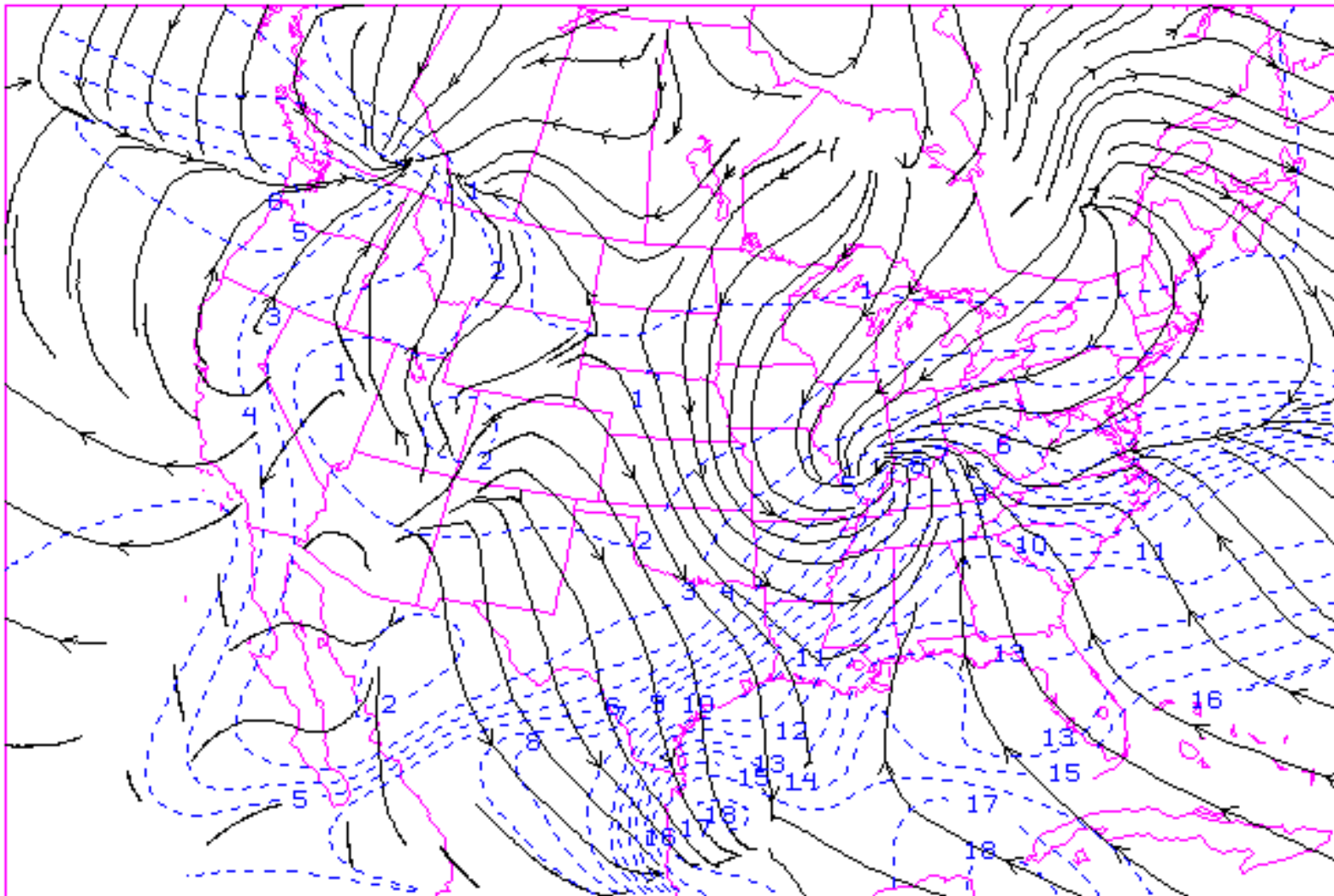
January Cluster 2  
25% Pacific-mP and 25% dilute Tropical-mod. mT  
areal coverage of NCUS



Accounts for 5% of days in January

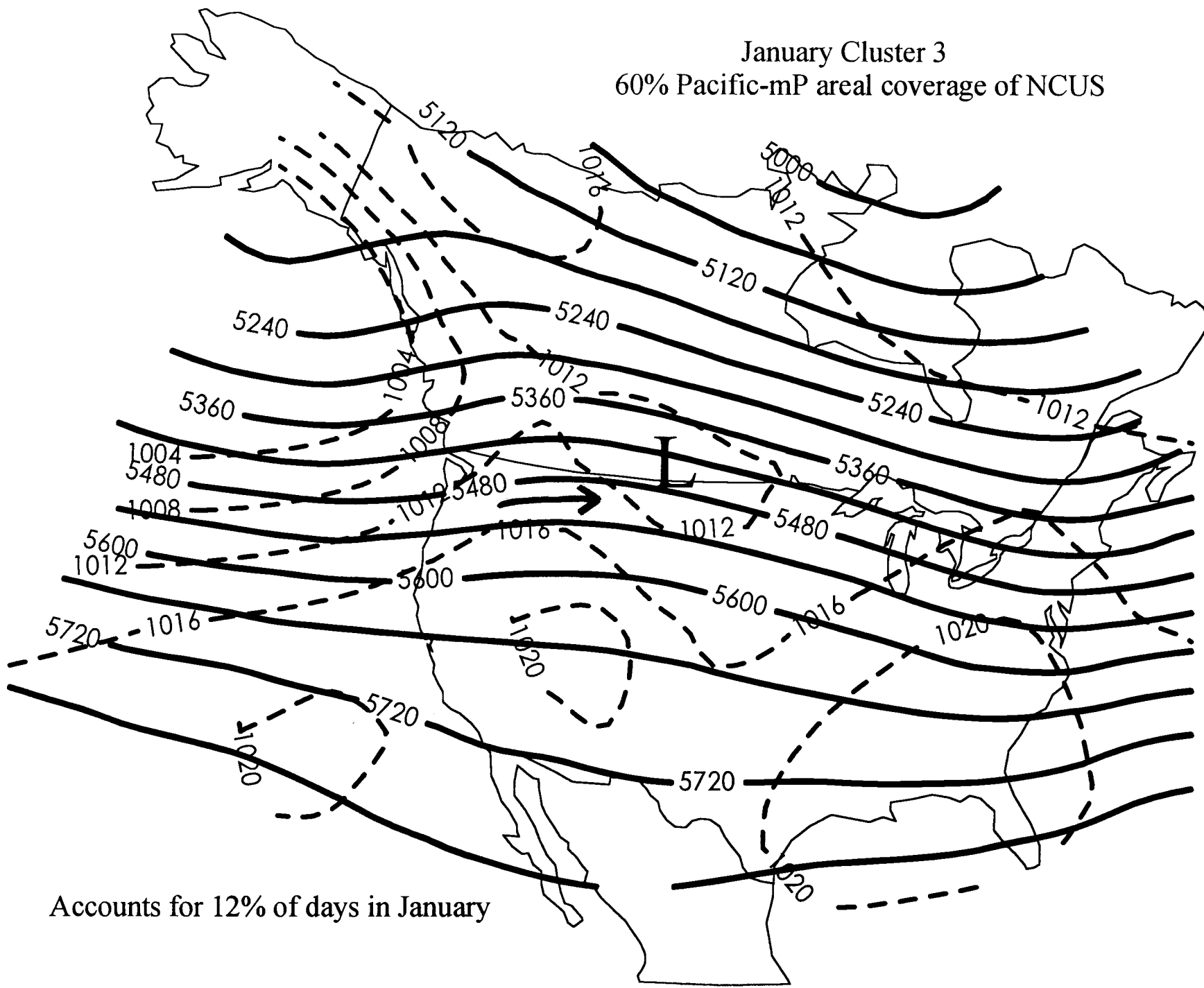


Z (GPM) TIME 0 DAY 94054 500 MB VALID 94054/12Z  
 T (C) TIME 0 DAY 94054 500 MB VALID 94054/12Z



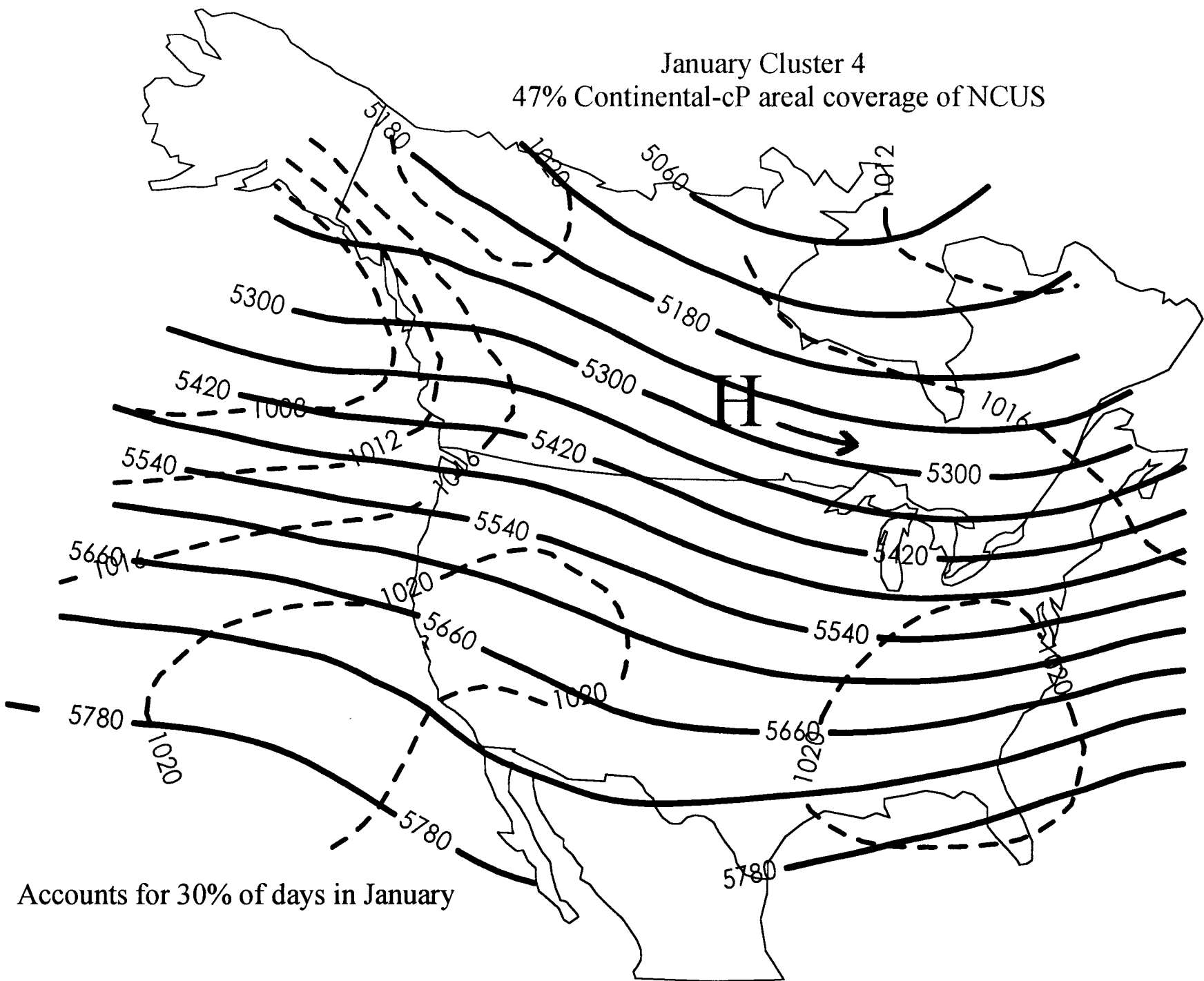
STR TIME 12 DAY 94054 SFC  
MIX (GPKG) TIME 12 DAY 94054 SFC

January Cluster 3  
60% Pacific-mP areal coverage of NCUS



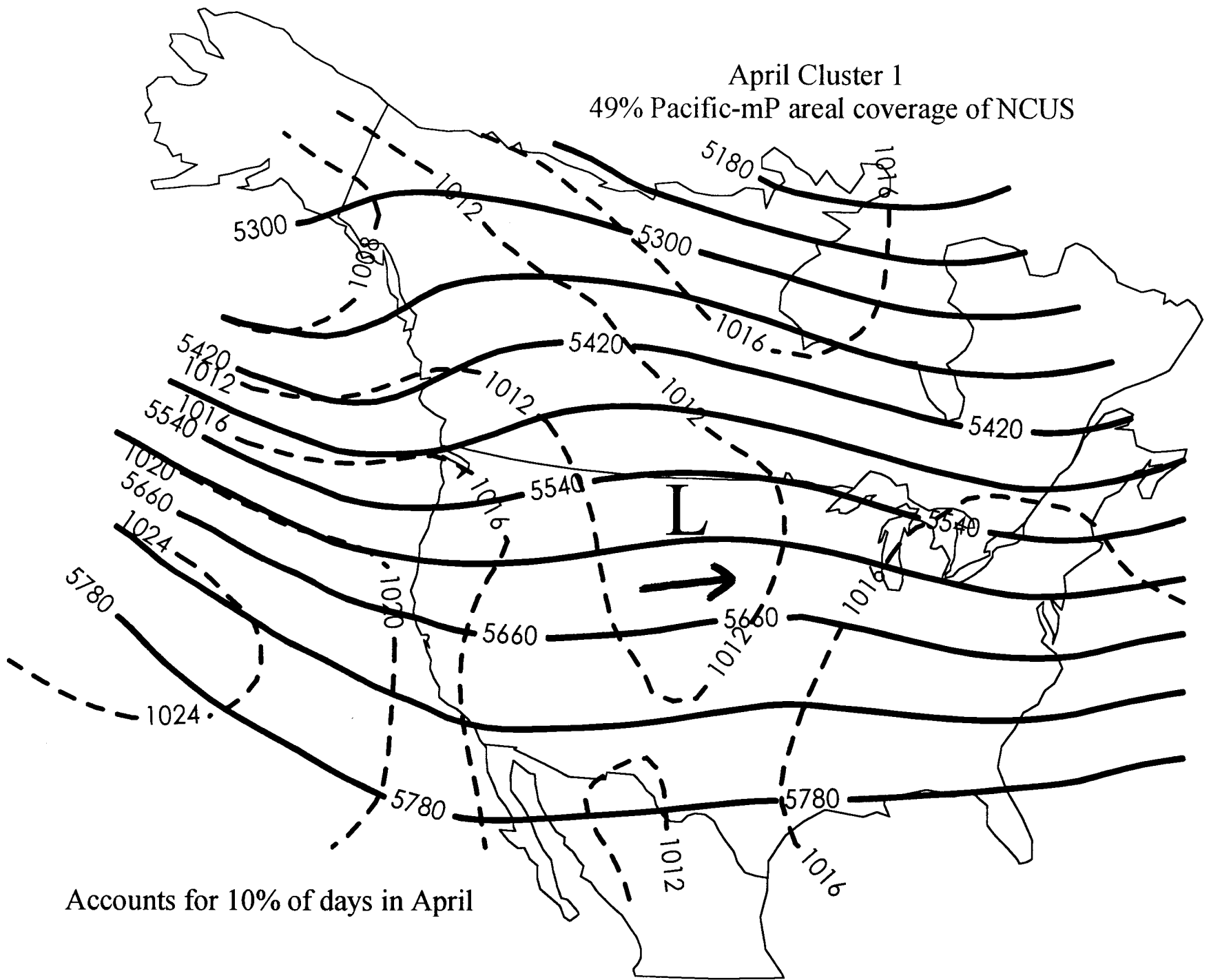
Accounts for 12% of days in January

January Cluster 4  
47% Continental-cP areal coverage of NCUS



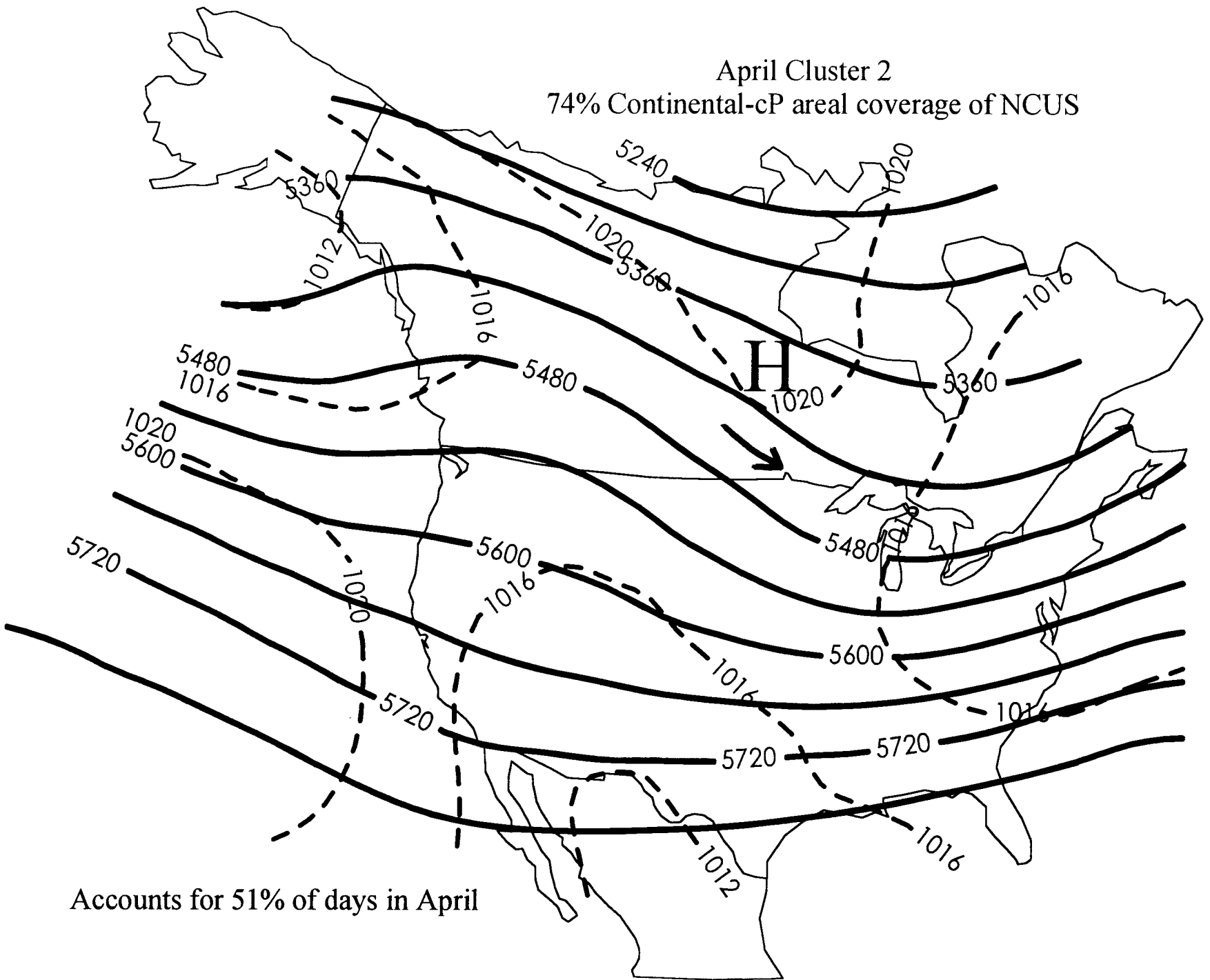
Accounts for 30% of days in January

April Cluster 1  
49% Pacific-mP areal coverage of NCUS



Accounts for 10% of days in April

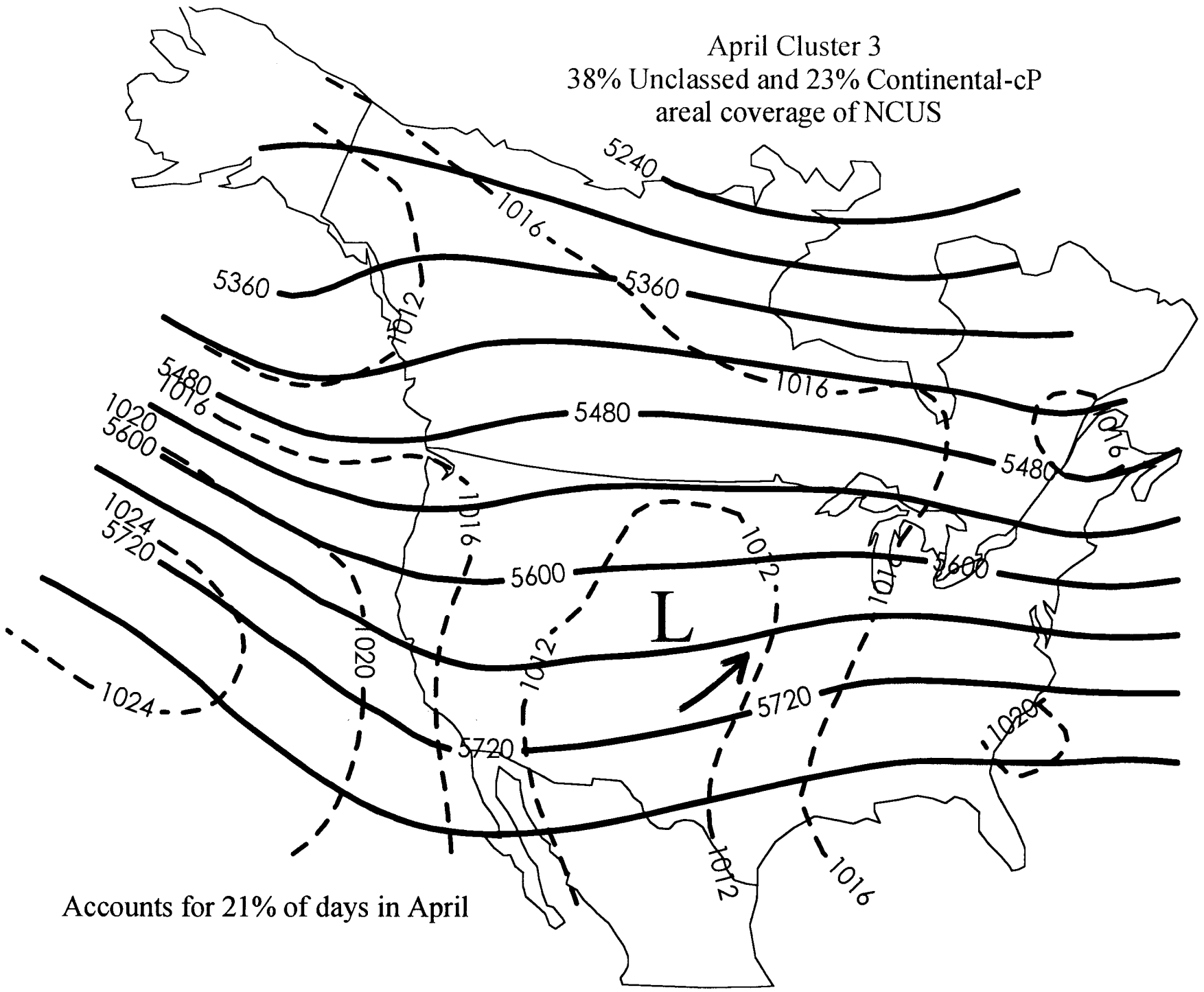
April Cluster 2  
74% Continental-cP areal coverage of NCUS



Accounts for 51% of days in April

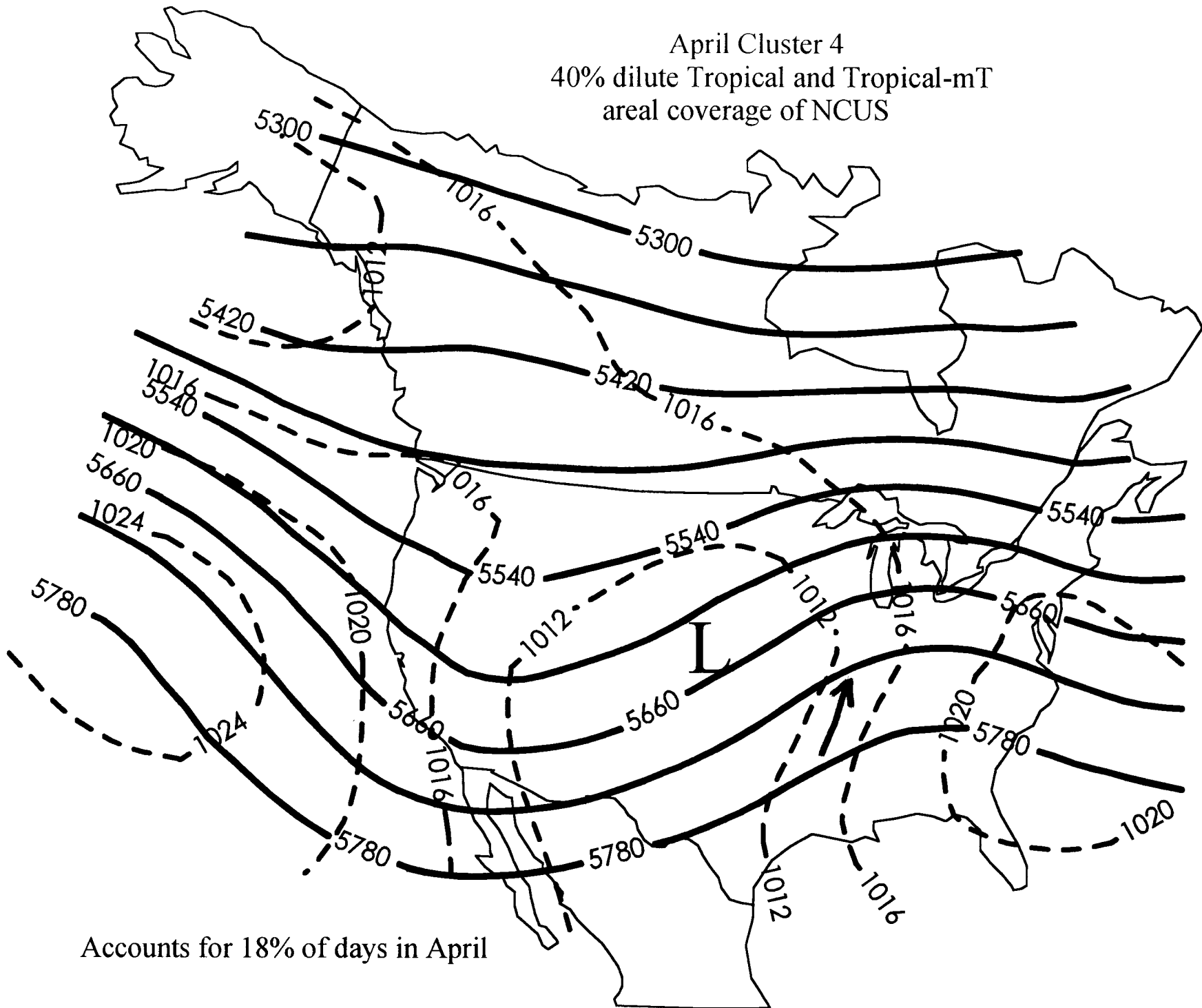


April Cluster 3  
38% Unclassified and 23% Continental-cP  
areal coverage of NCUS

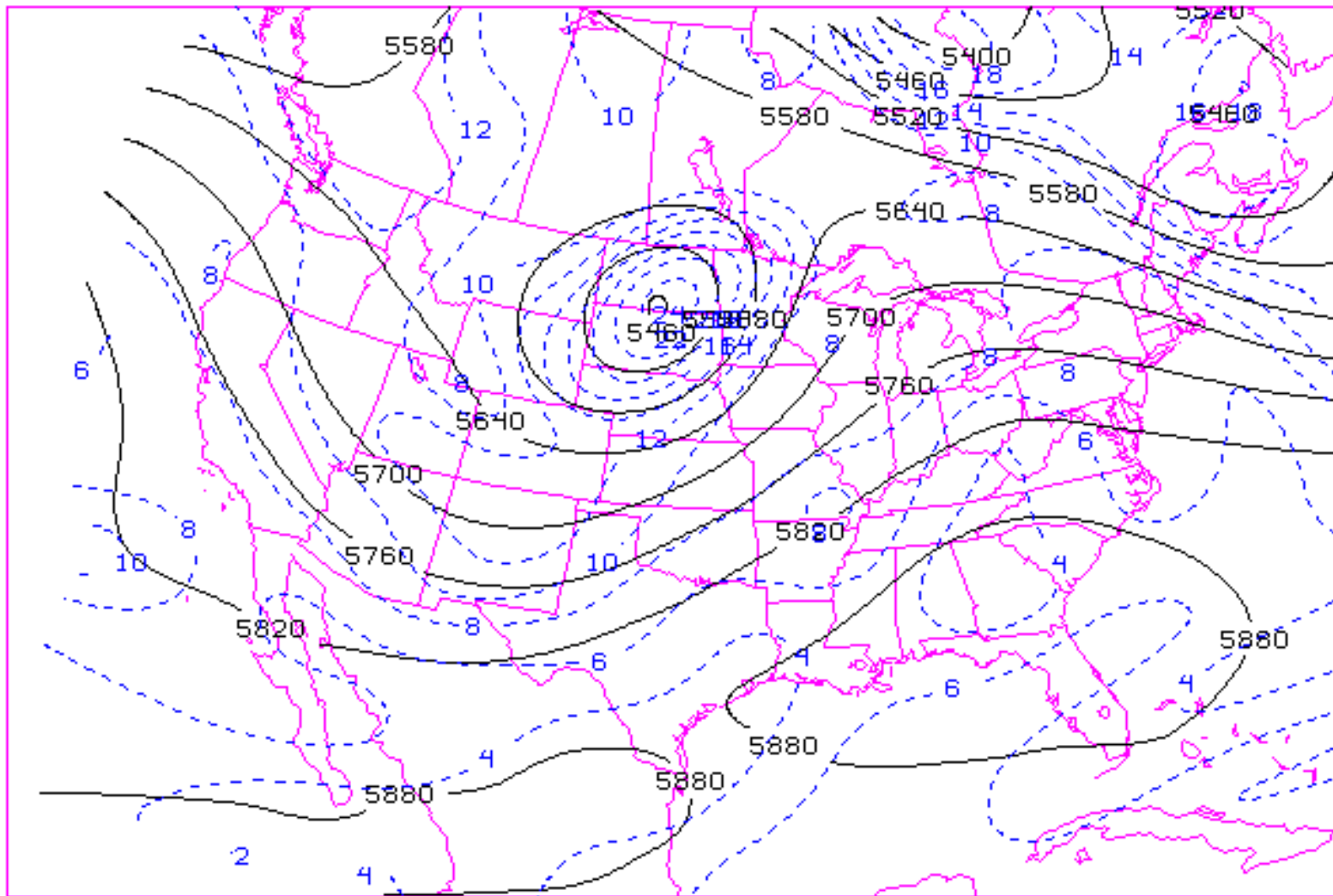


Accounts for 21% of days in April

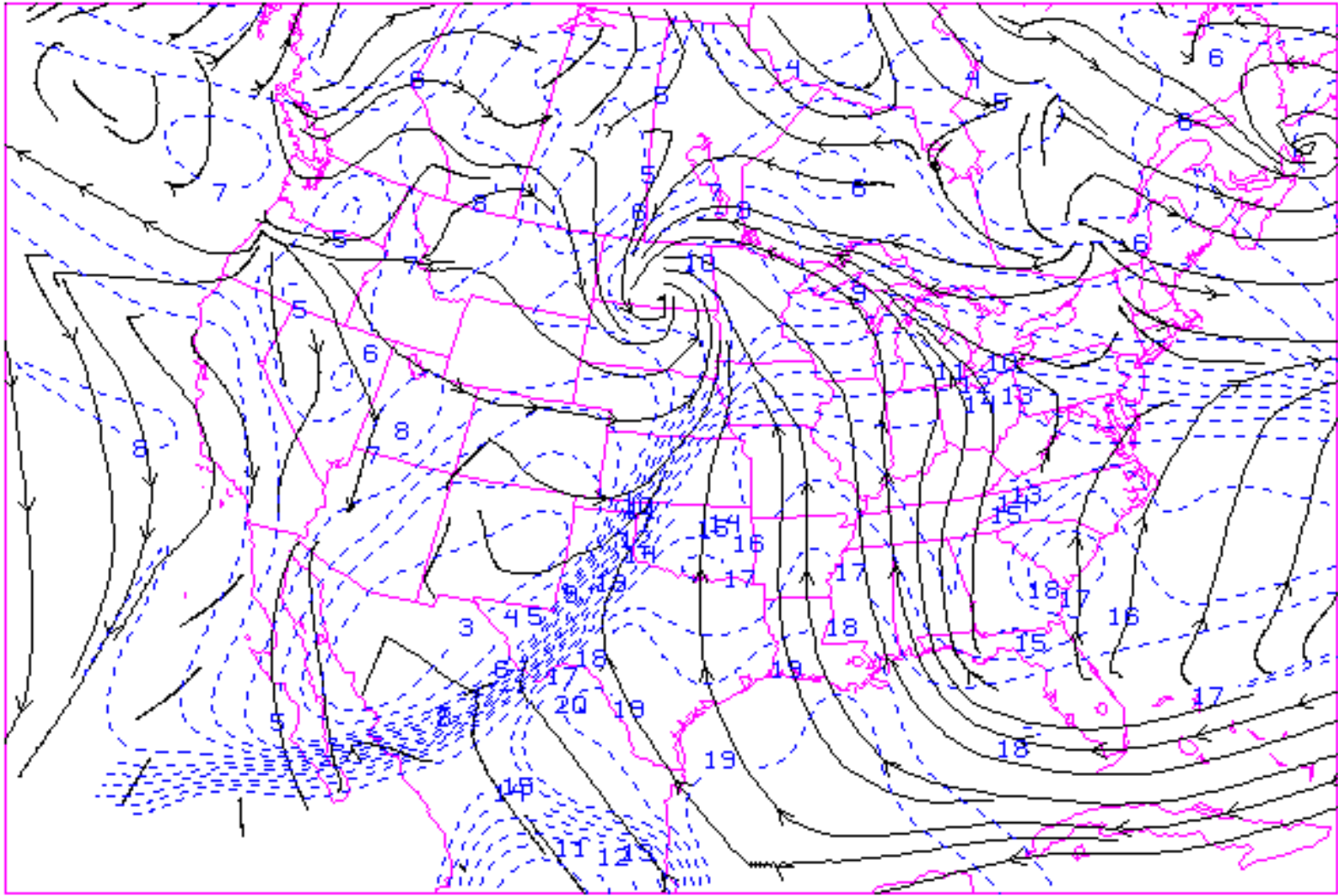
April Cluster 4  
40% dilute Tropical and Tropical-mT  
areal coverage of NCUS



Accounts for 18% of days in April

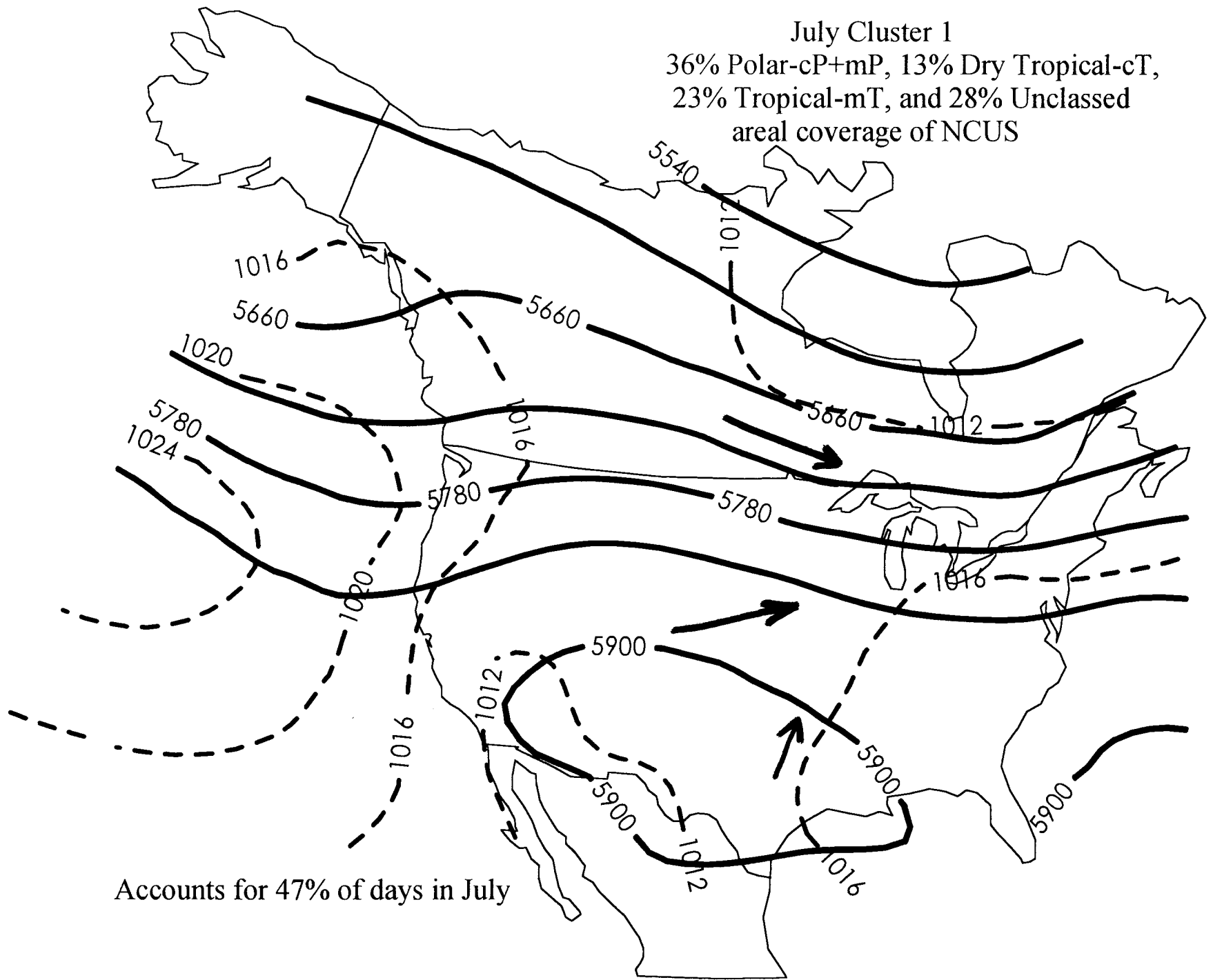


Z (GPM) TIME 0 DAY 93159 500 MB VALID 93159/12Z  
 RBV TIME 0 DAY 93159 500 MB VALID 93159/12Z



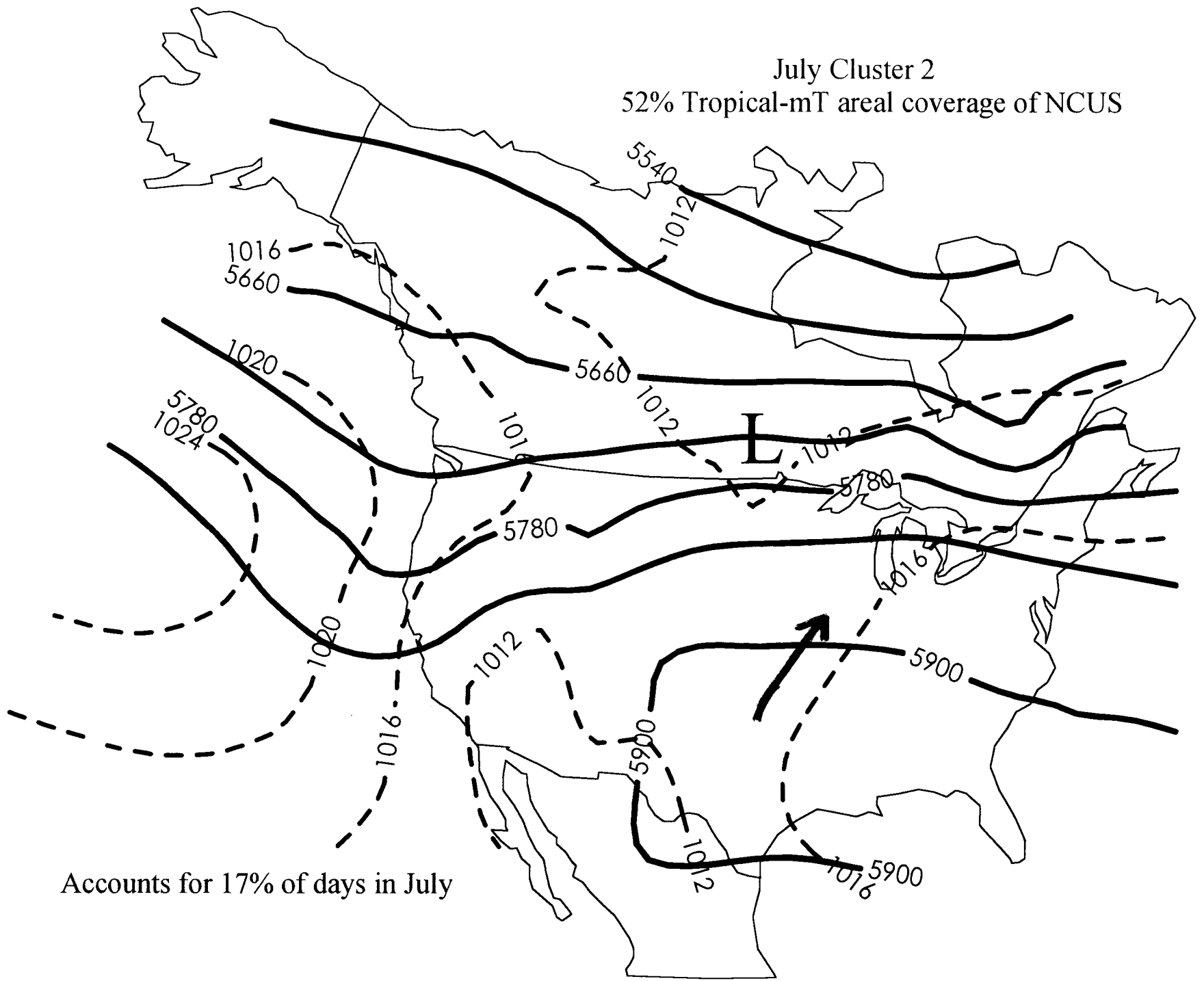
STR TIME 11 DAY 93159 SFC  
MIX (GPKG) TIME 11 DAY 93159 SFC

July Cluster 1  
36% Polar-cP+mP, 13% Dry Tropical-cT,  
23% Tropical-mT, and 28% Unclassed  
areal coverage of NCUS



Accounts for 47% of days in July

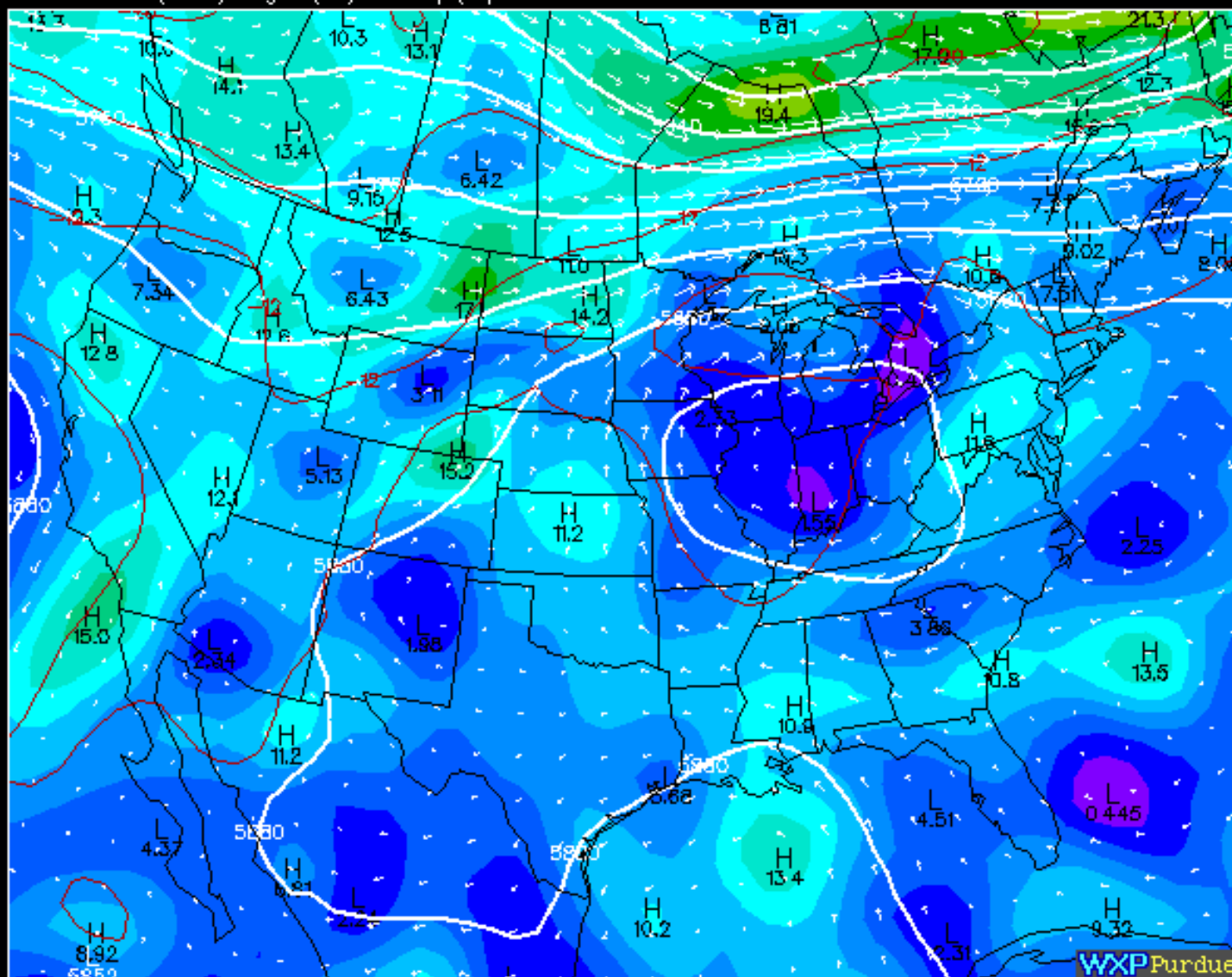
July Cluster 2  
52% Tropical-mT areal coverage of NCUS



Accounts for 17% of days in July

500 Vort(s-1) Hght(m) Temp(C) Vect

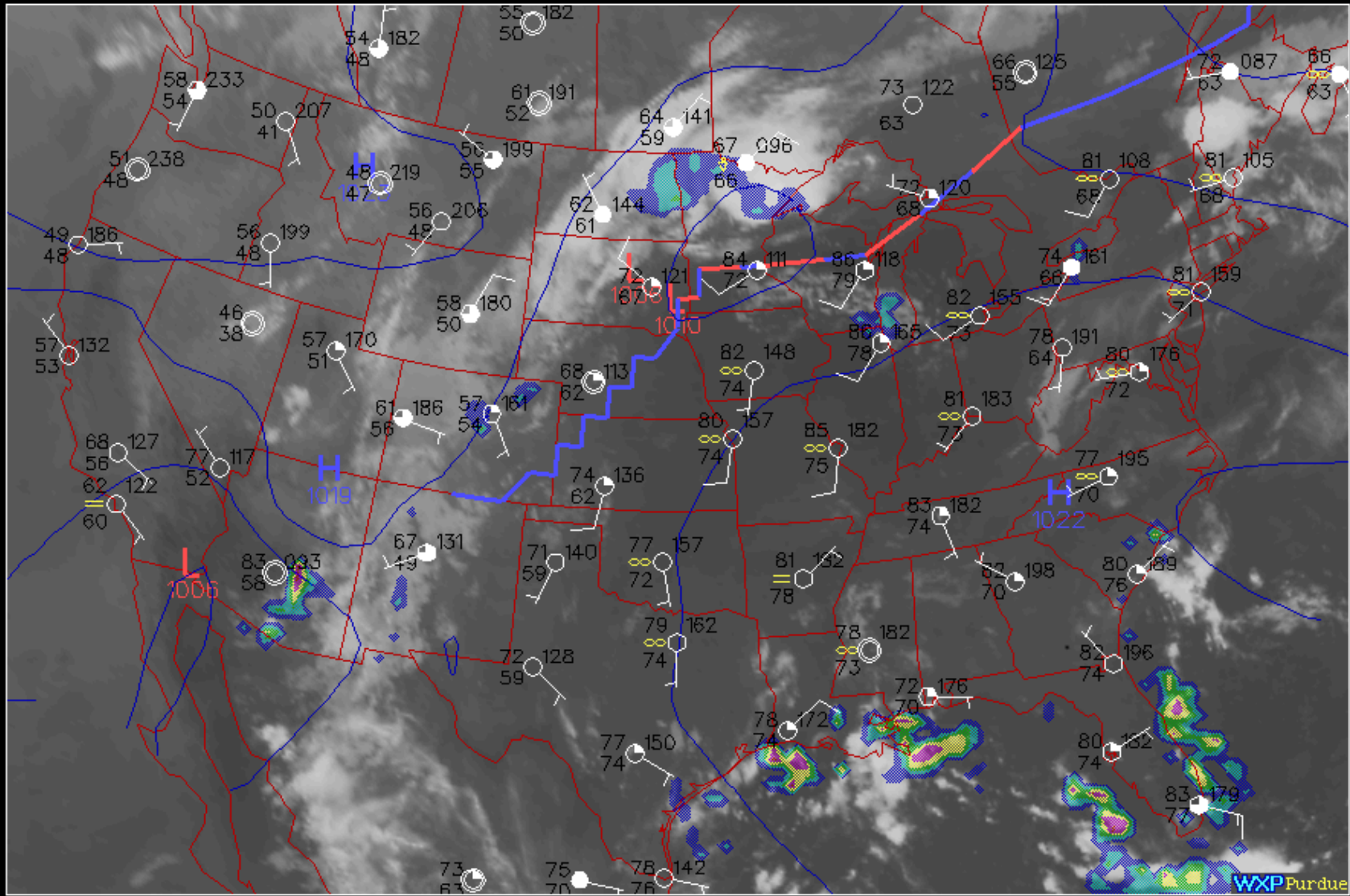
12 hour ETA valid 12Z FRI 14 JUL 95



-2.0 0 2.0 4.0 6.0 8.0 10 12 14 16 18 20 22 24

Hght(white) Temp(red)

# Surface data plot for 13Z 14 JUL 1995

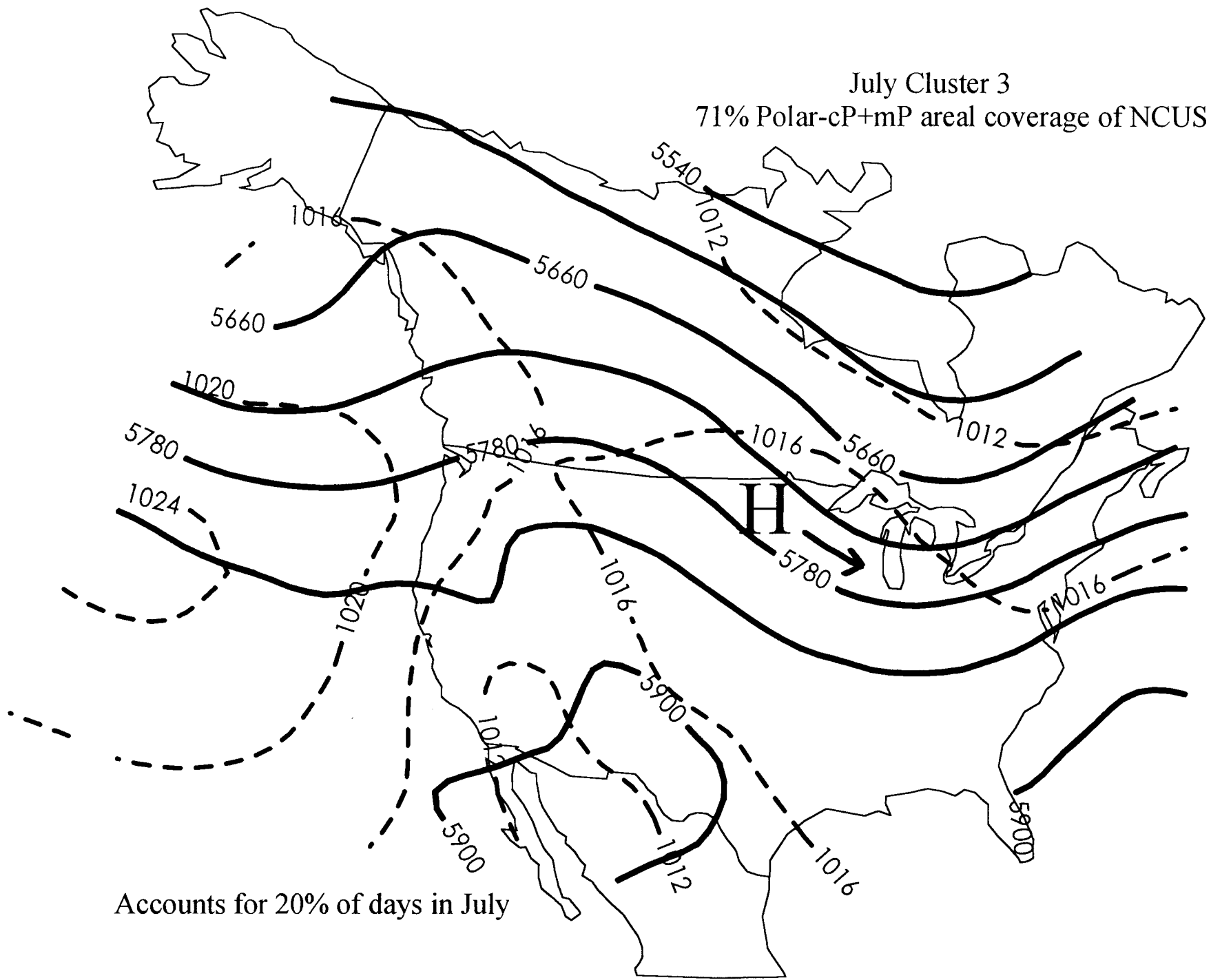


Echo Intensities: 1 2 3 4 5 6 7

Fronts at 9Z

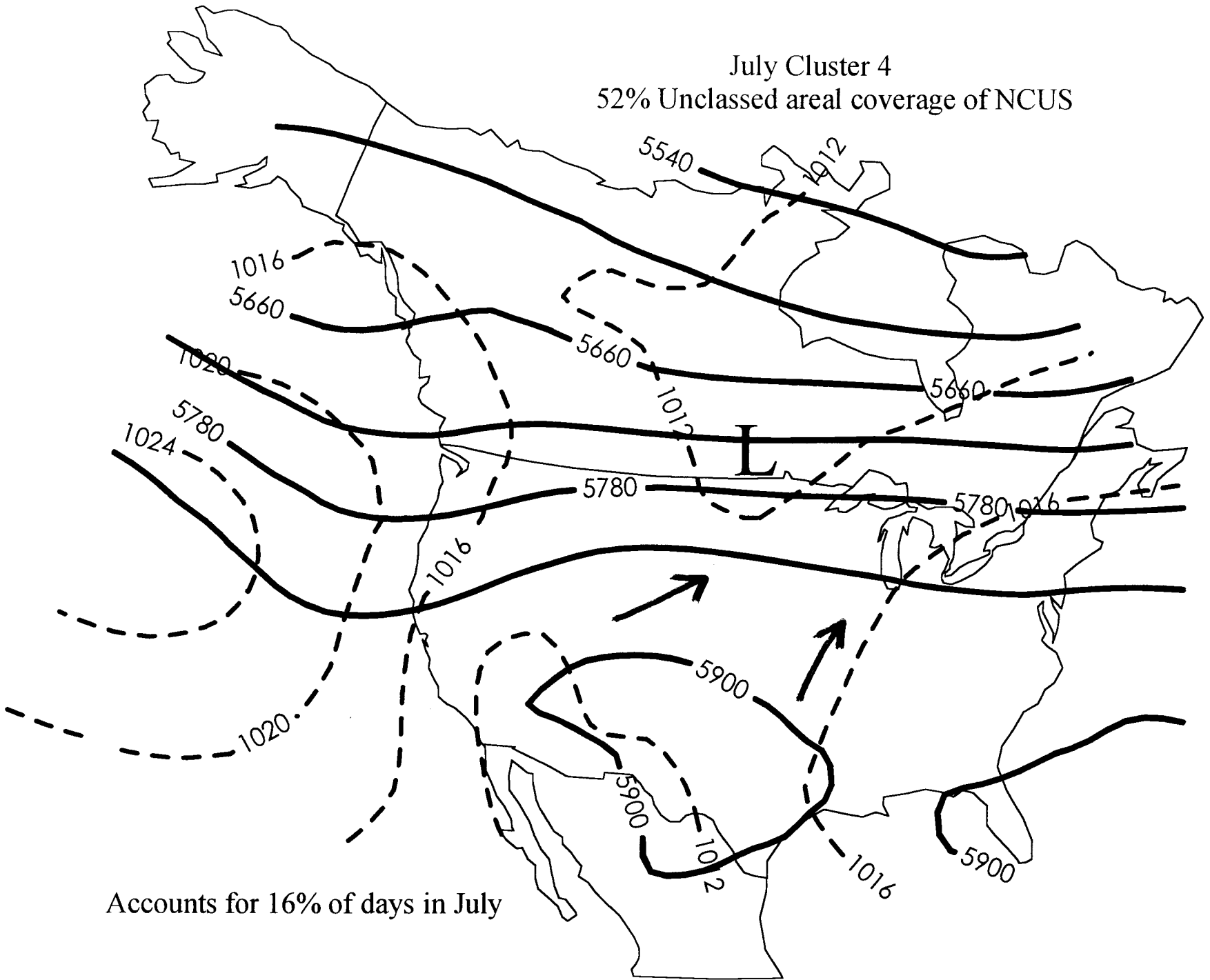


July Cluster 3  
71% Polar-cP+mP areal coverage of NCUS



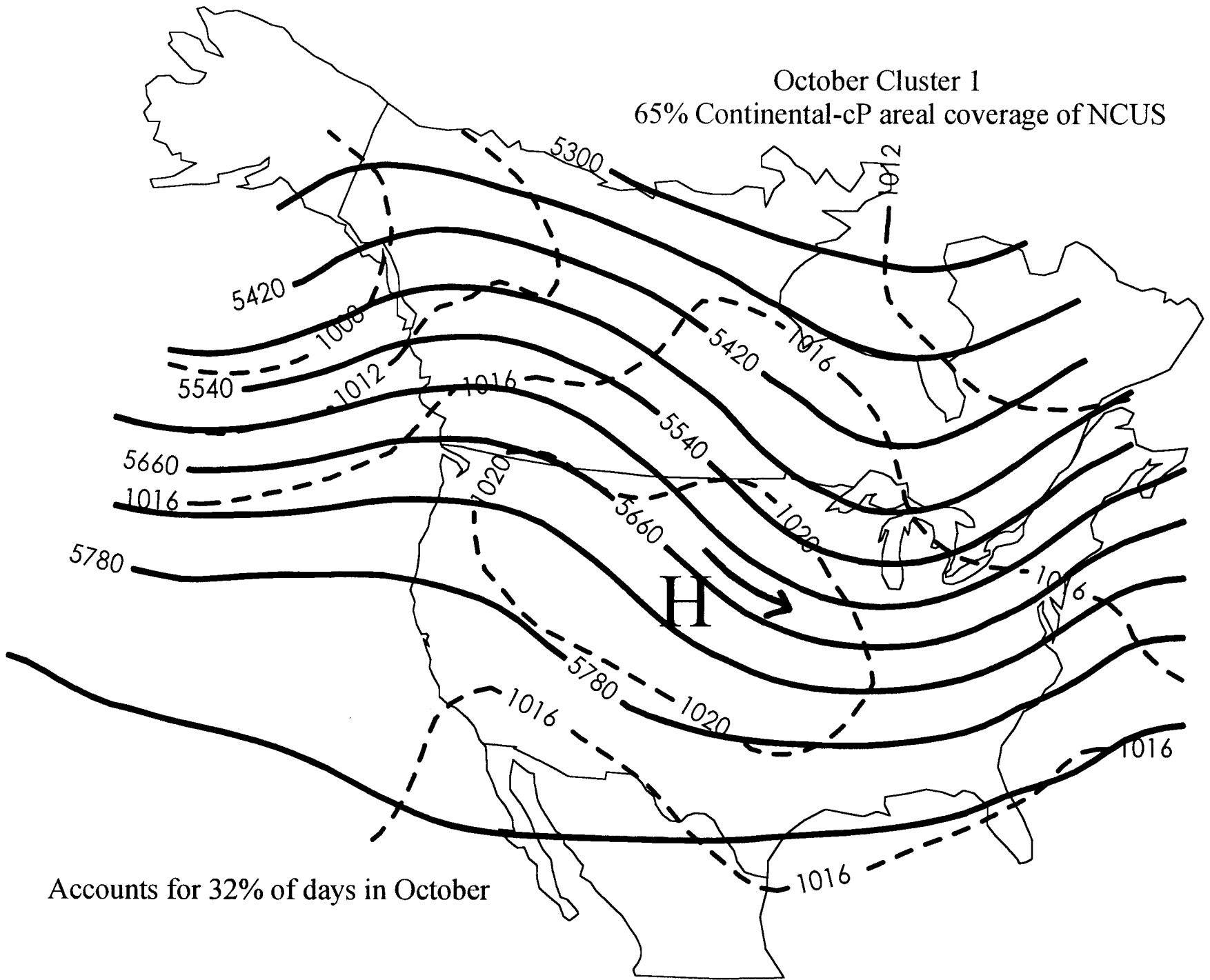
Accounts for 20% of days in July

July Cluster 4  
52% Unclassed areal coverage of NCUS



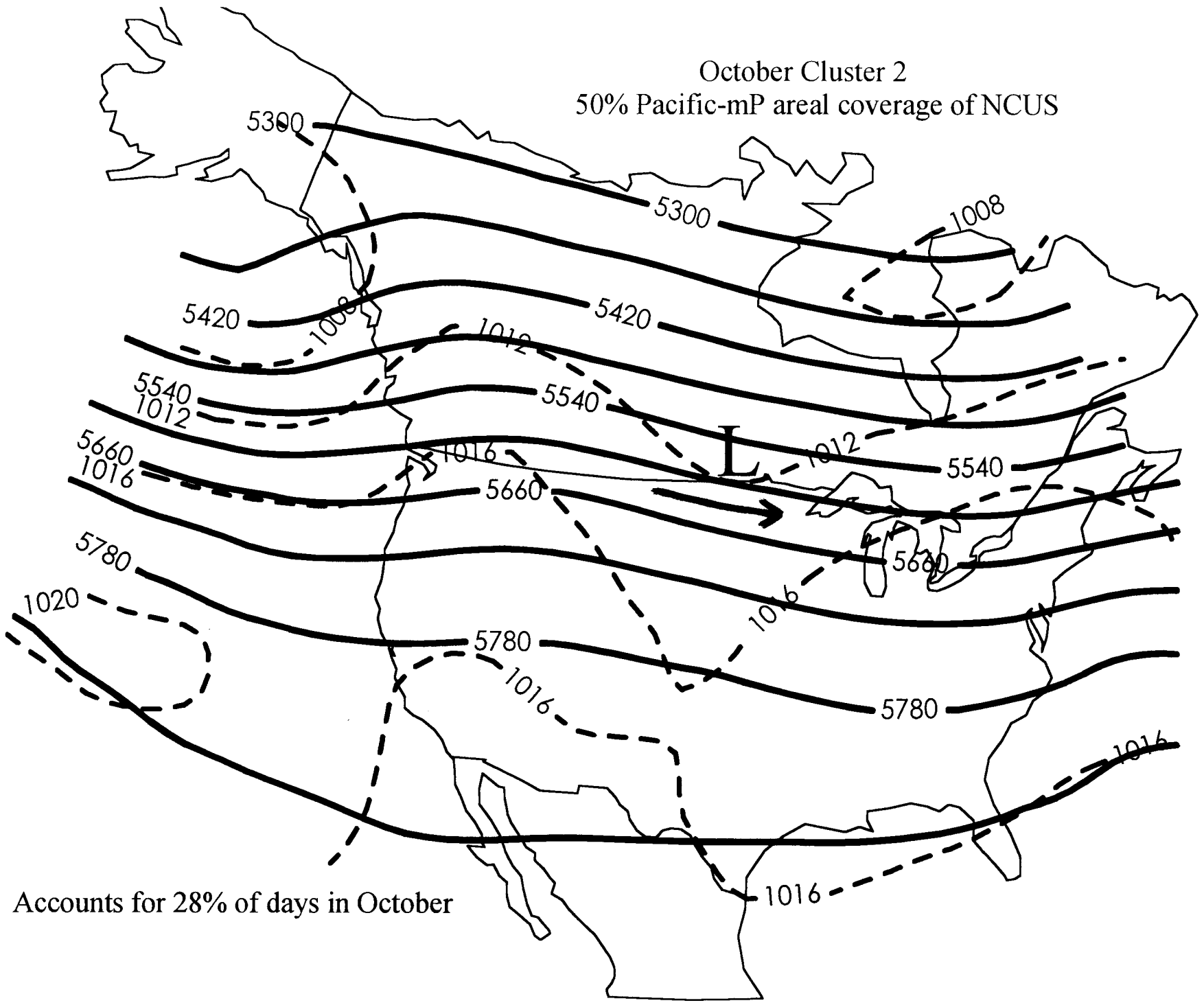
Accounts for 16% of days in July

October Cluster 1  
65% Continental-cP areal coverage of NCUS



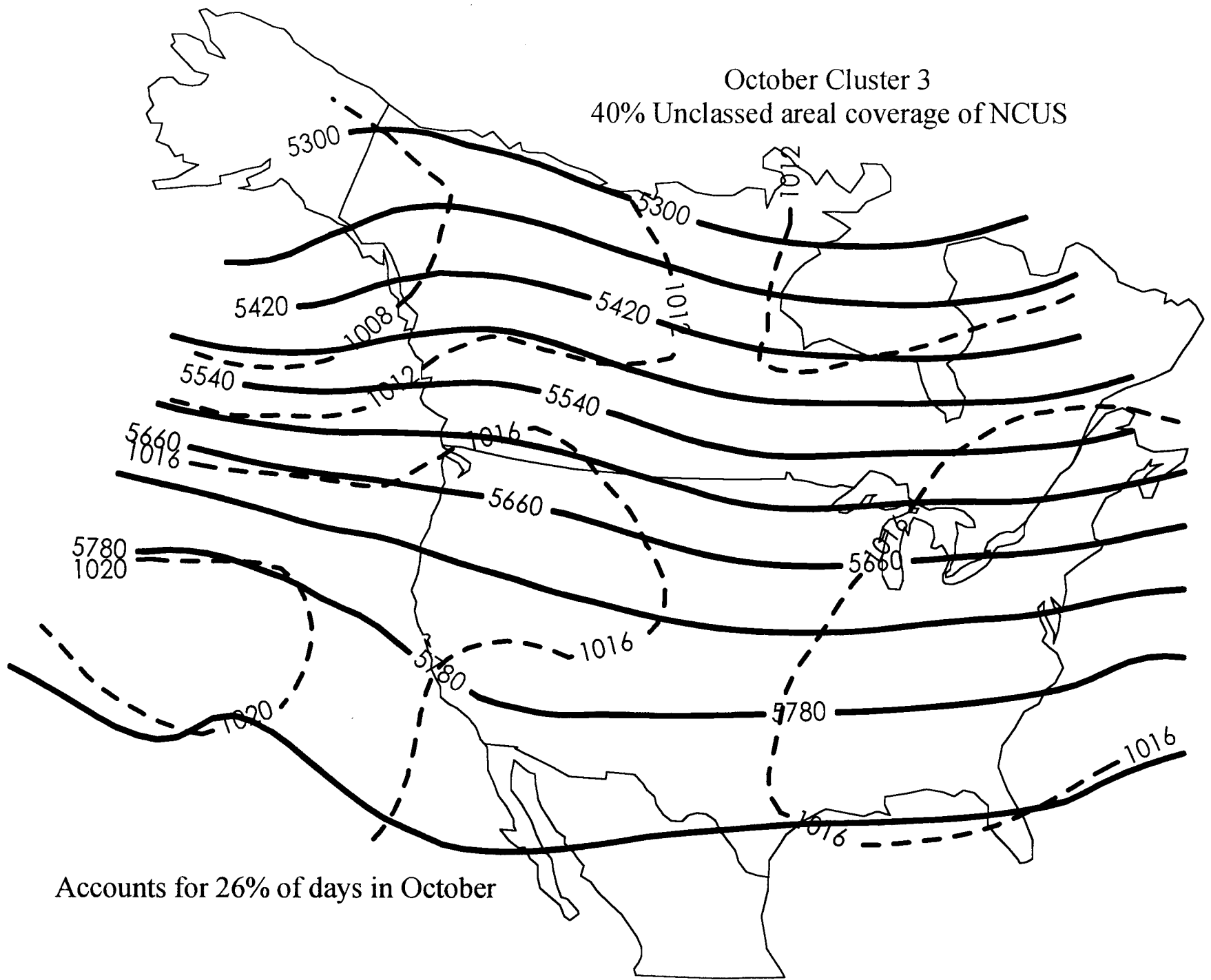
Accounts for 32% of days in October

October Cluster 2  
50% Pacific-mP areal coverage of NCUS



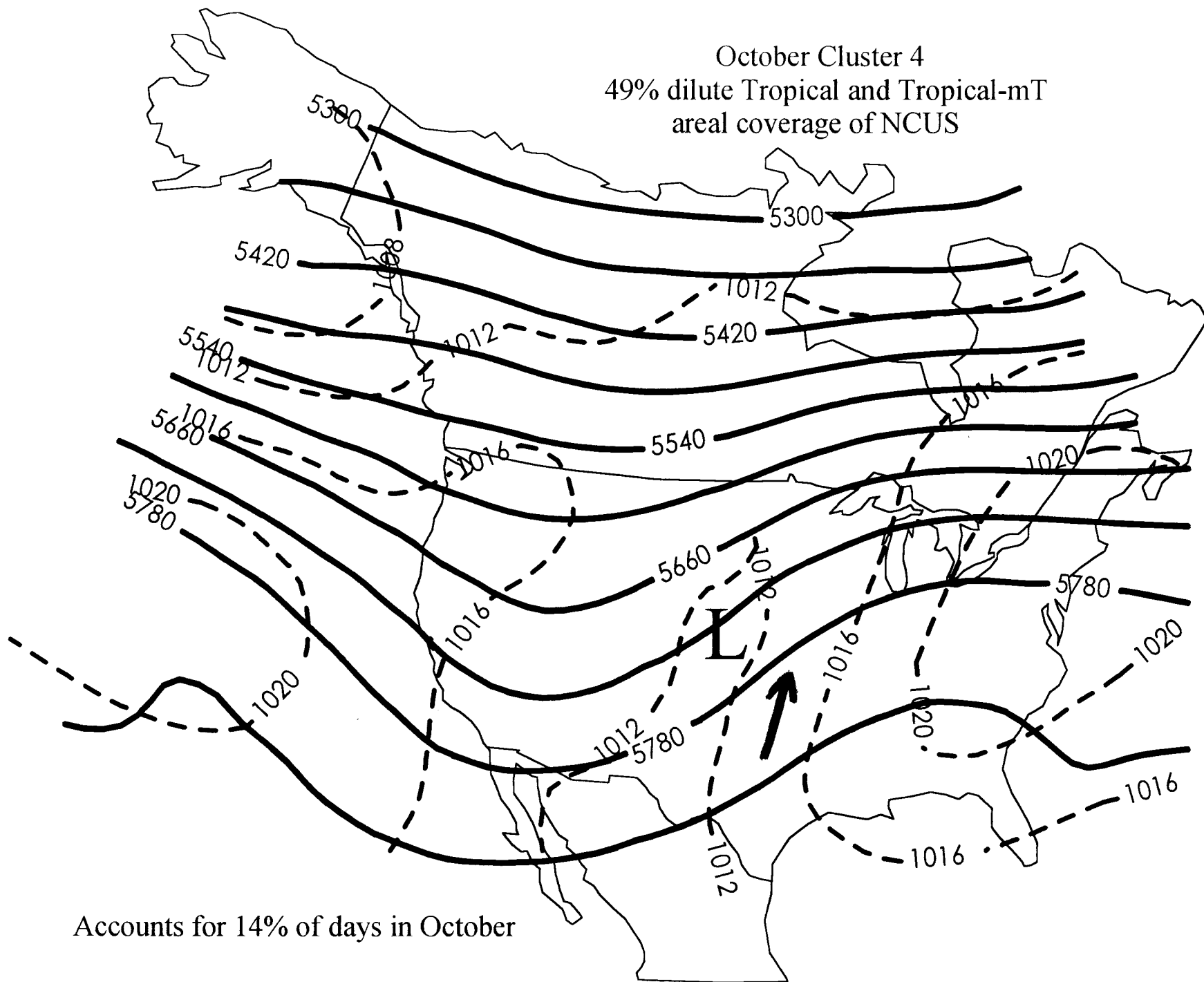
Accounts for 28% of days in October

October Cluster 3  
40% Unclassified areal coverage of NCUS



Accounts for 26% of days in October

October Cluster 4  
49% dilute Tropical and Tropical-mT  
areal coverage of NCUS



Accounts for 14% of days in October