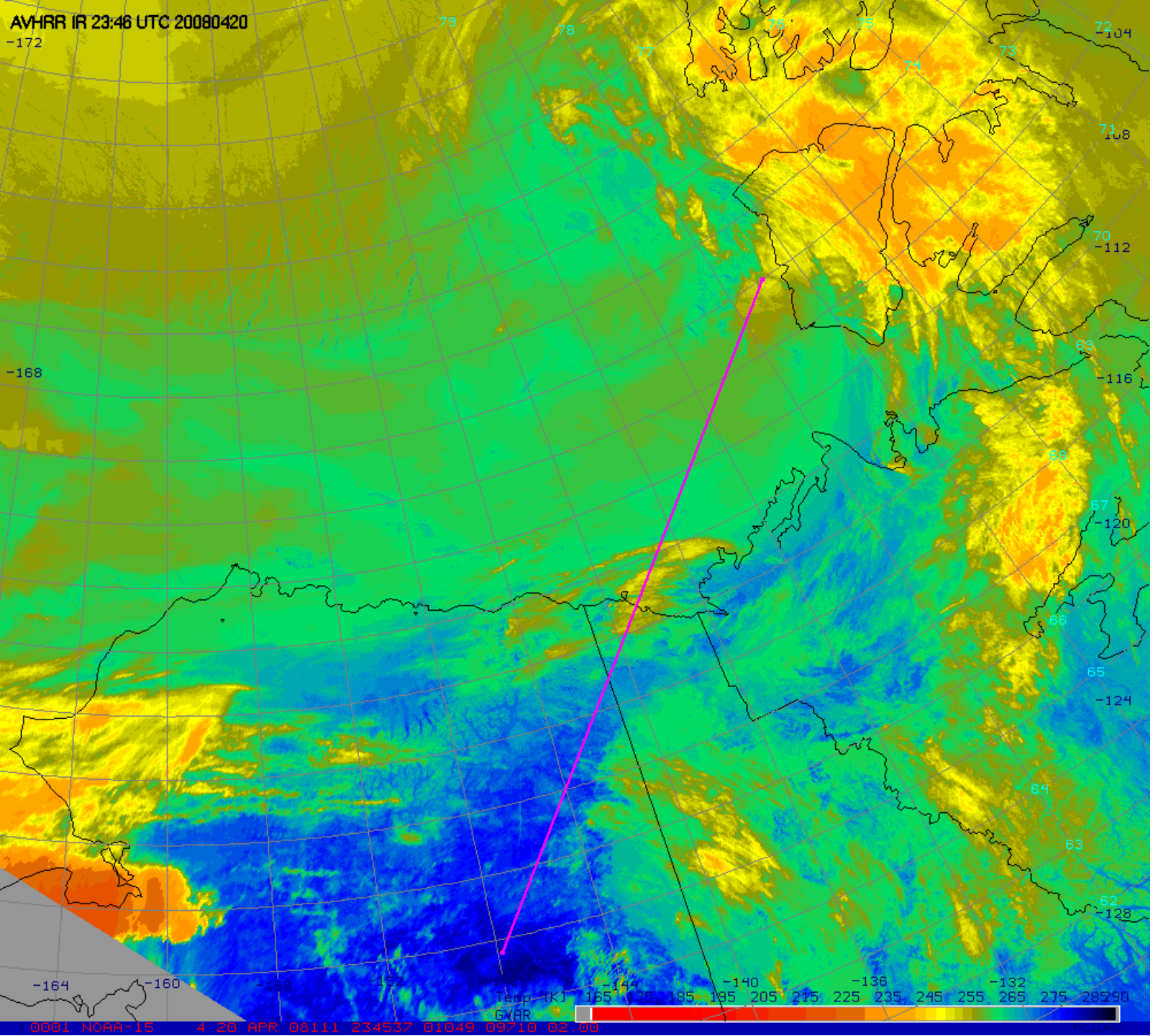
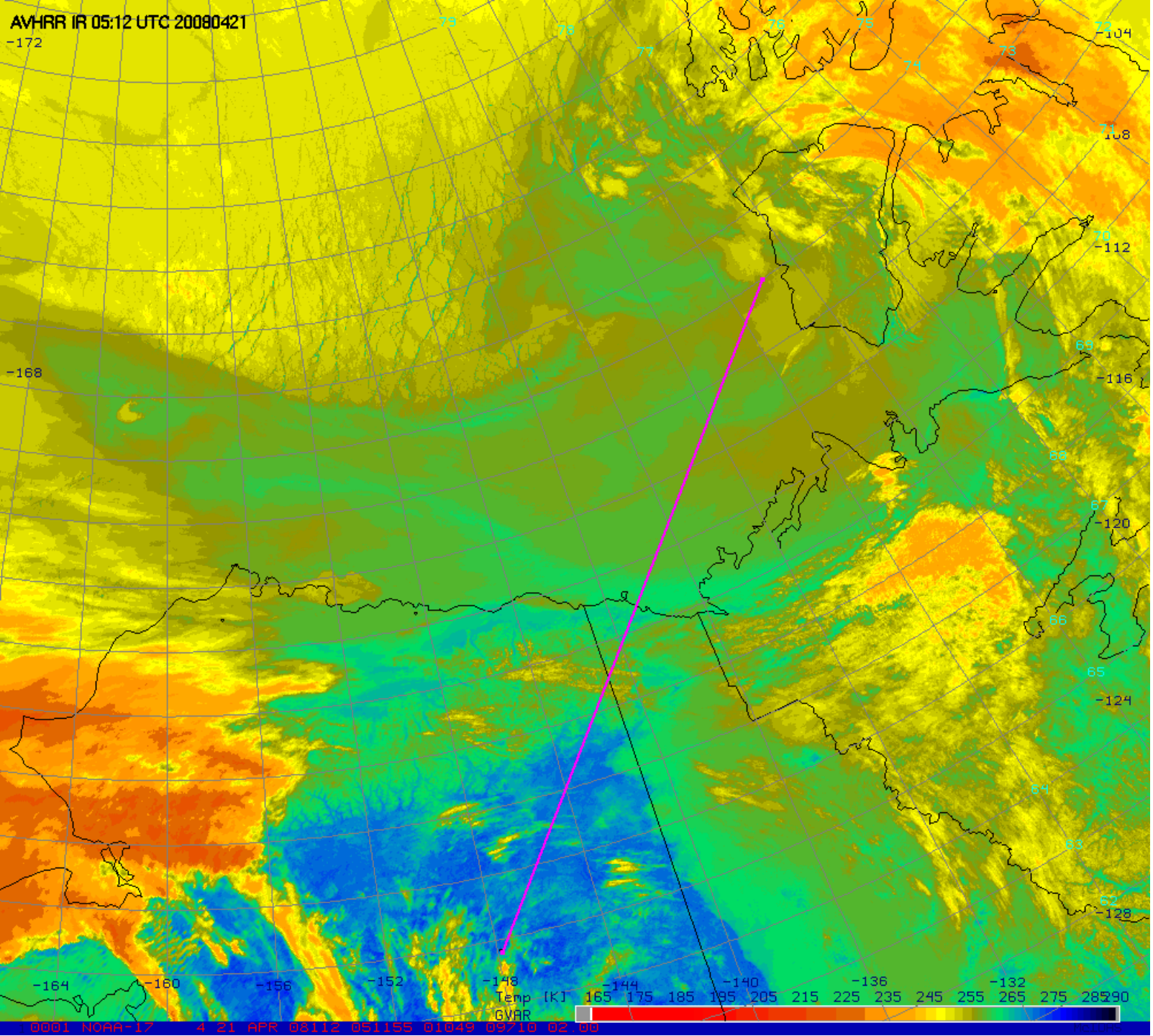


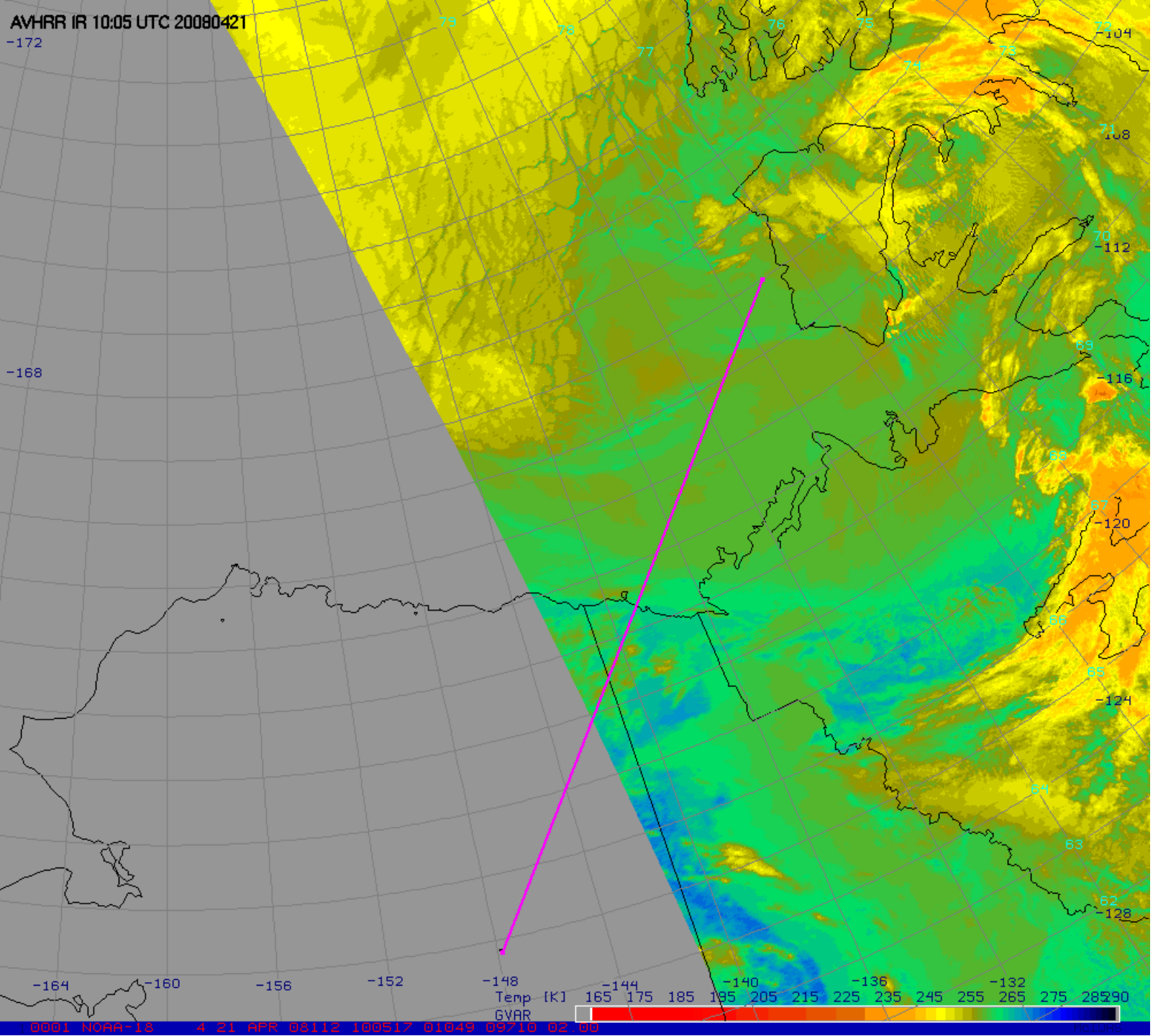
3:45 PM local Sunday

Much of the southern Arctic Ocean is covered by very low level cloud, with cloud tops probably not more than 500 m above sea level.



9:12 PM local Sunday

The low level cloud is moving towards the southeast, with high level cloud moving into western Alaska.

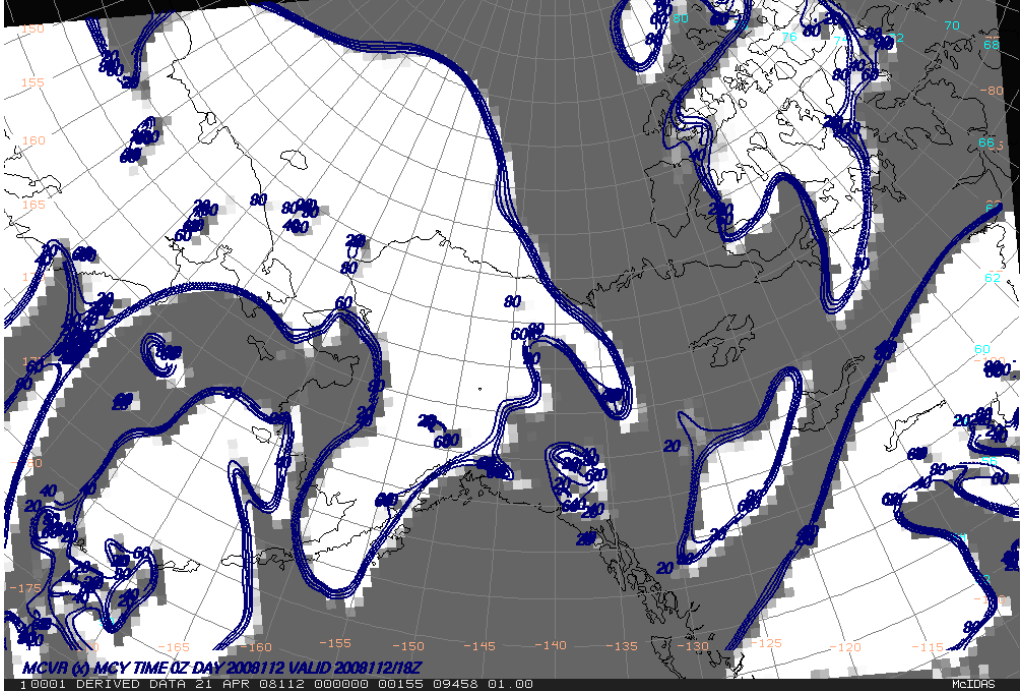


2:05 AM local Monday

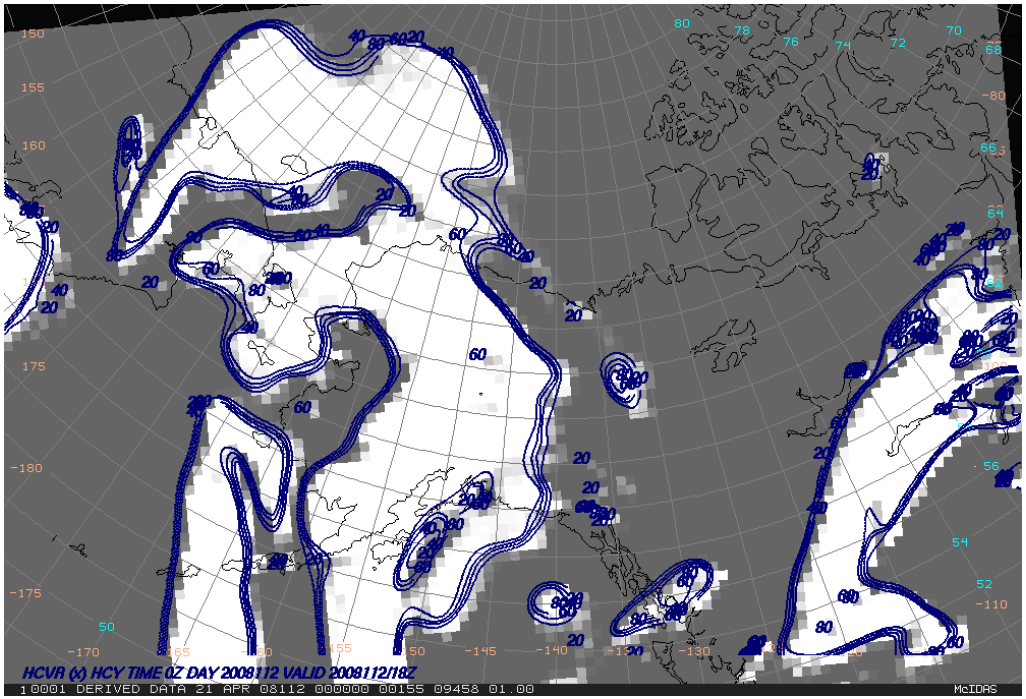
At the current rate of advection, the low level cloud should be south and east of the northern end of the flight track by 12:00 PM local time on Monday.

10:00 AM local Monday

Mid-level cloud

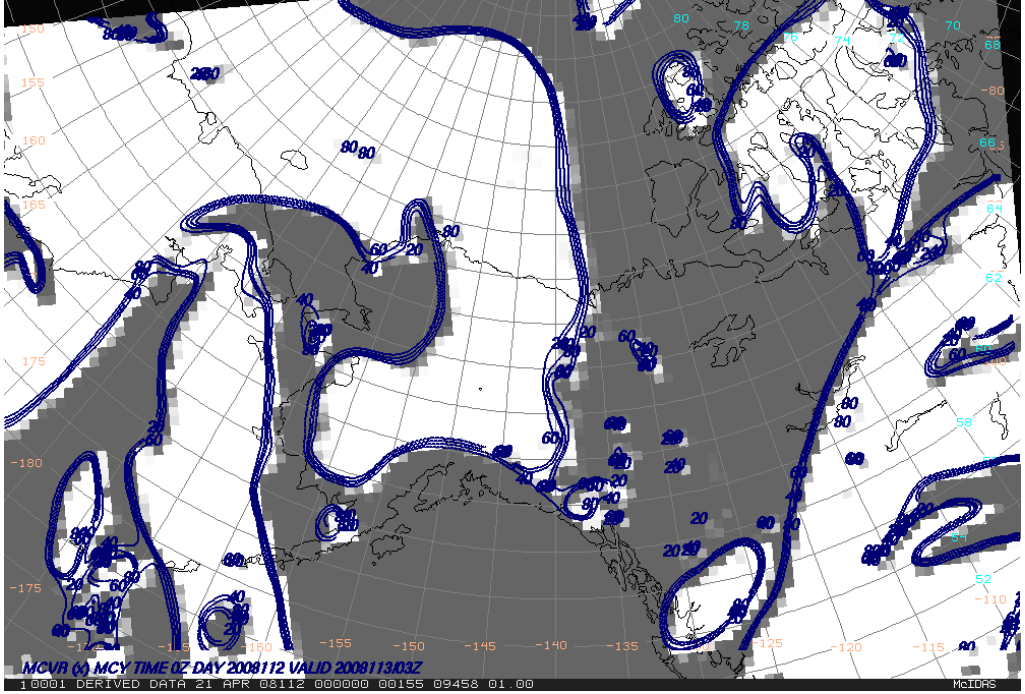


High-level cloud

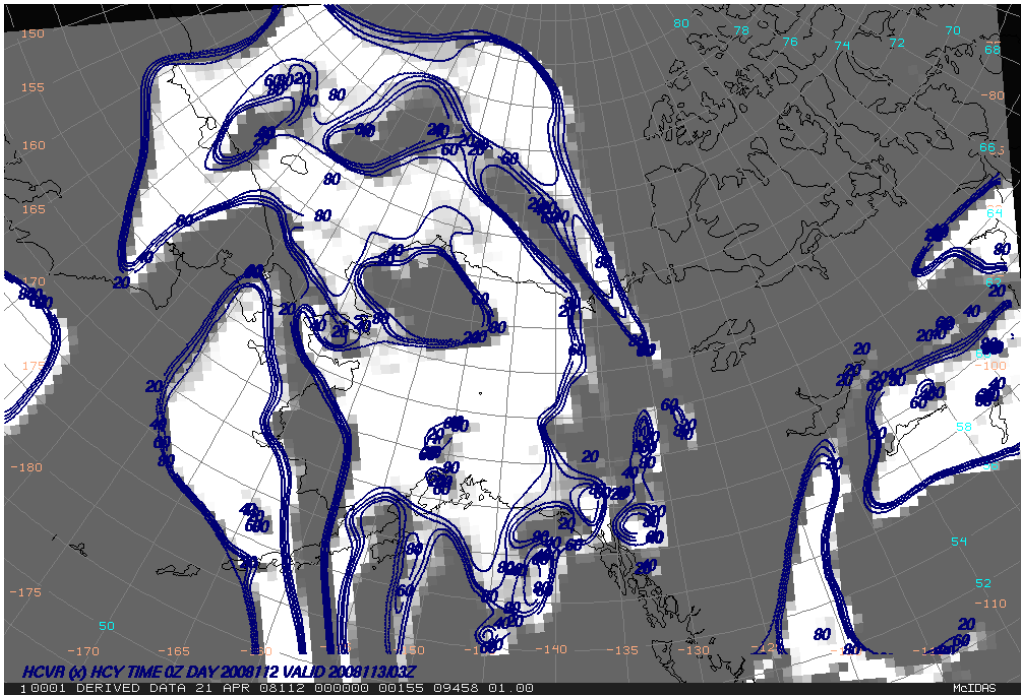


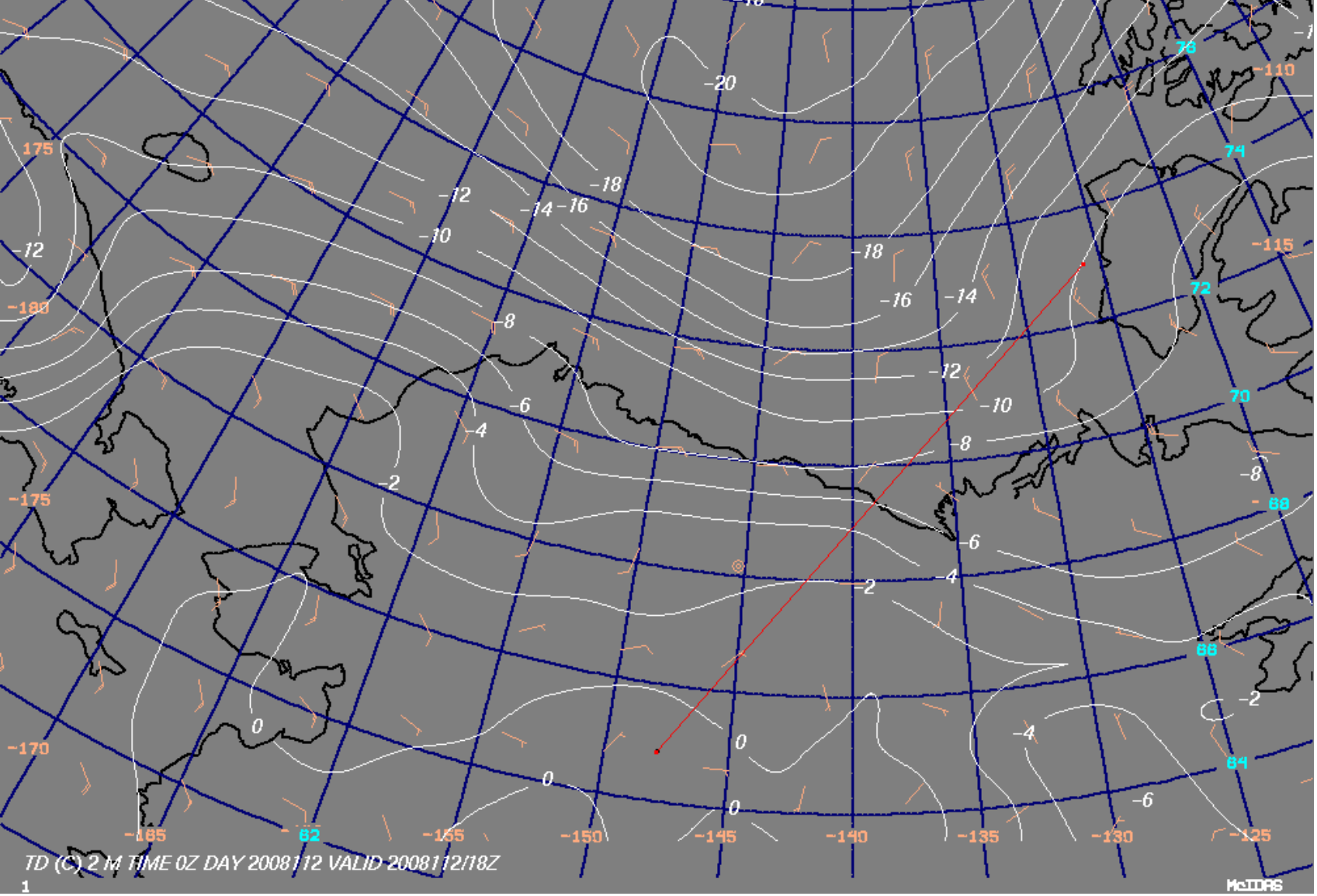
7:00 PM local Monday

Mid-level cloud

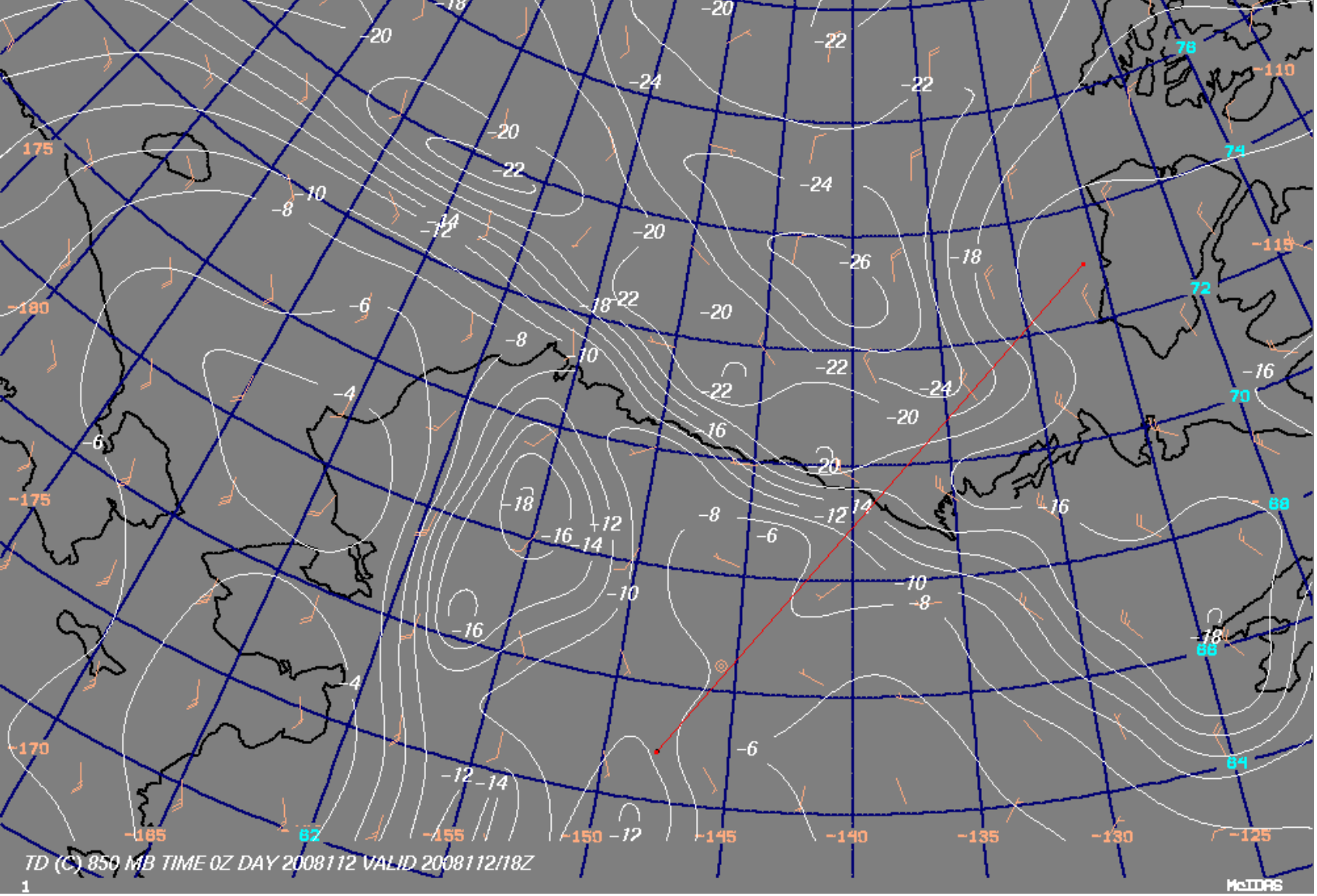


High-level cloud

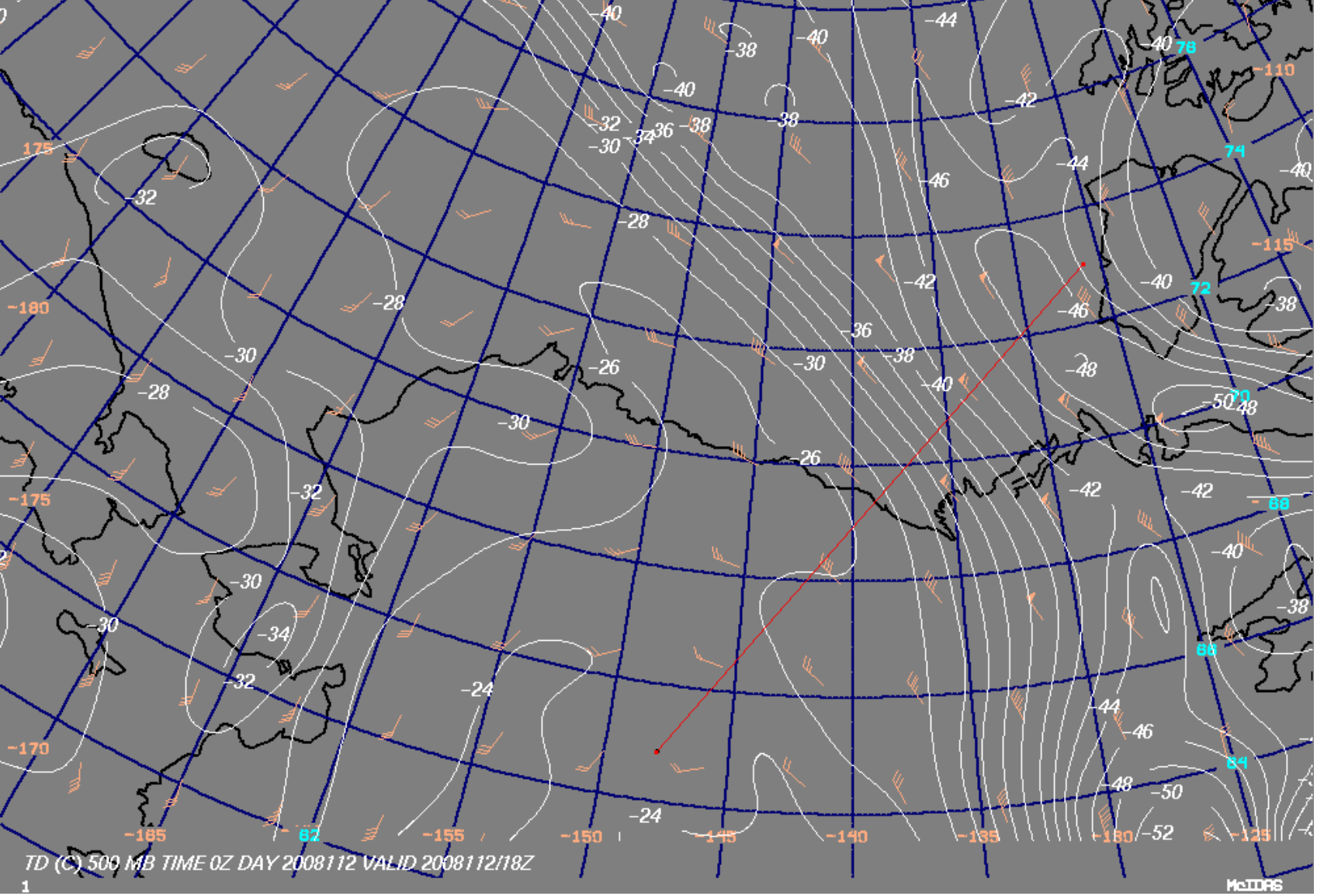




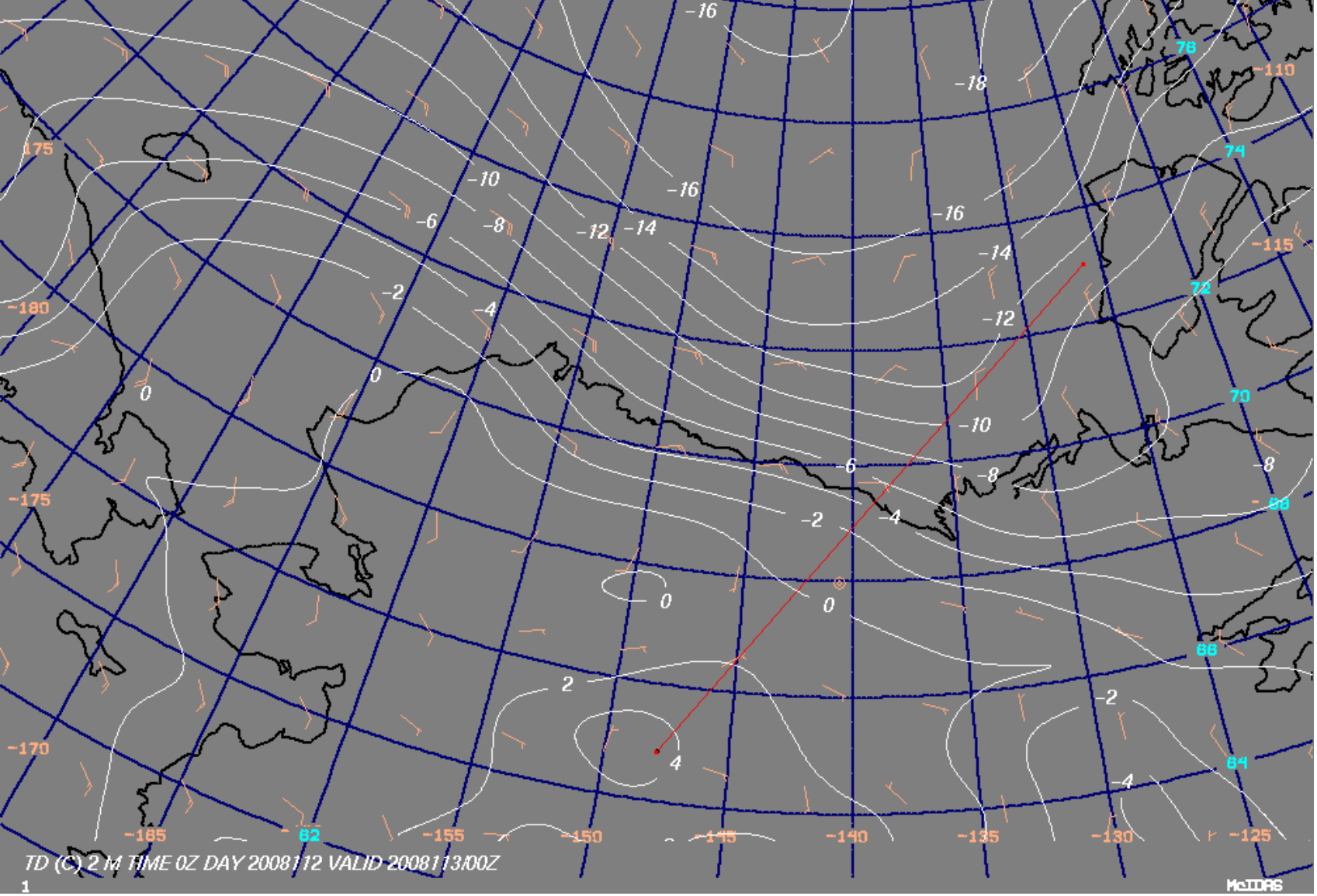
10:00 AM local, Monday, surface dewpoint and winds



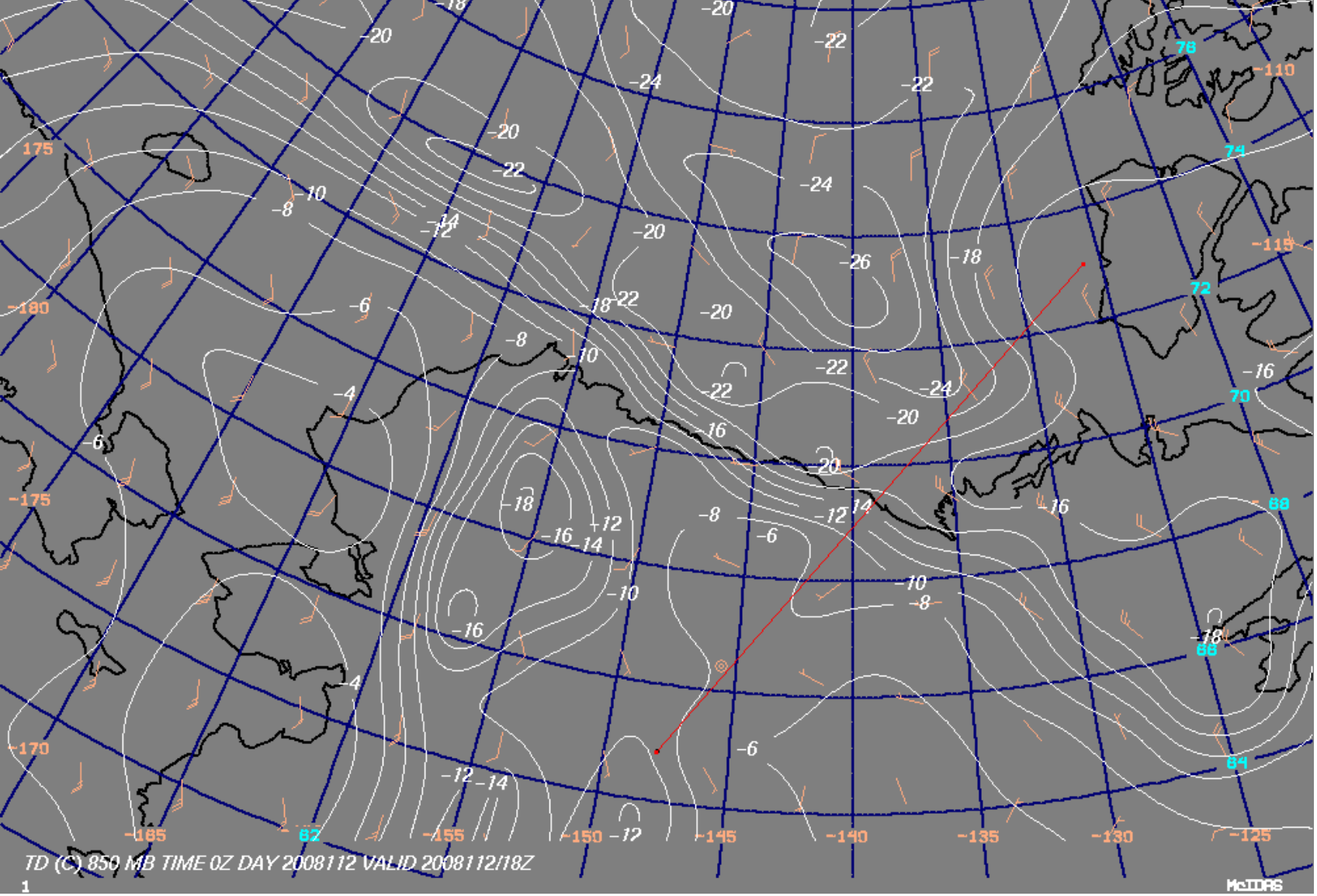
10:00 AM local, Monday, 850 hPa dewpoint and winds



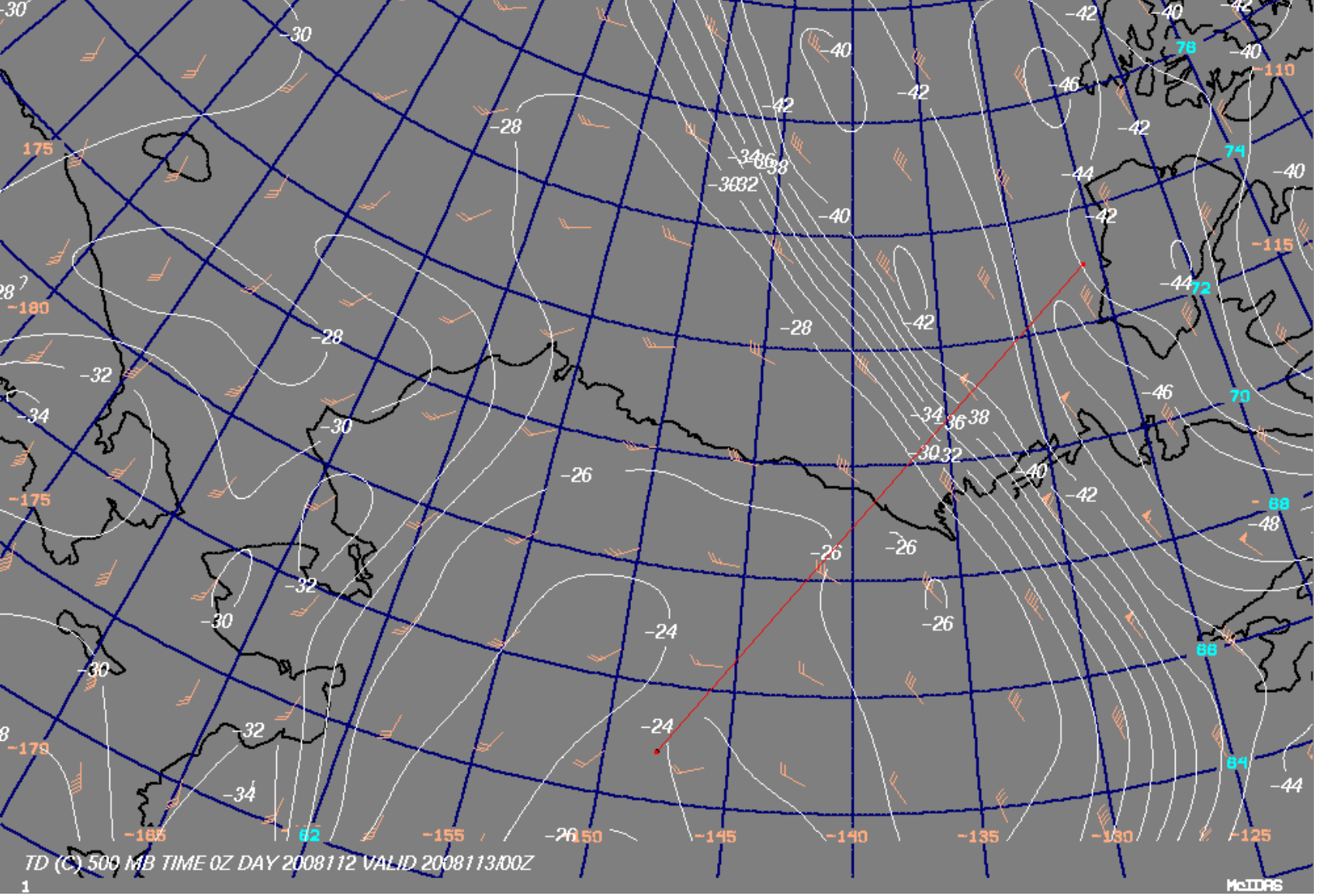
10:00 AM local, Monday, 500 hPa dewpoint and winds



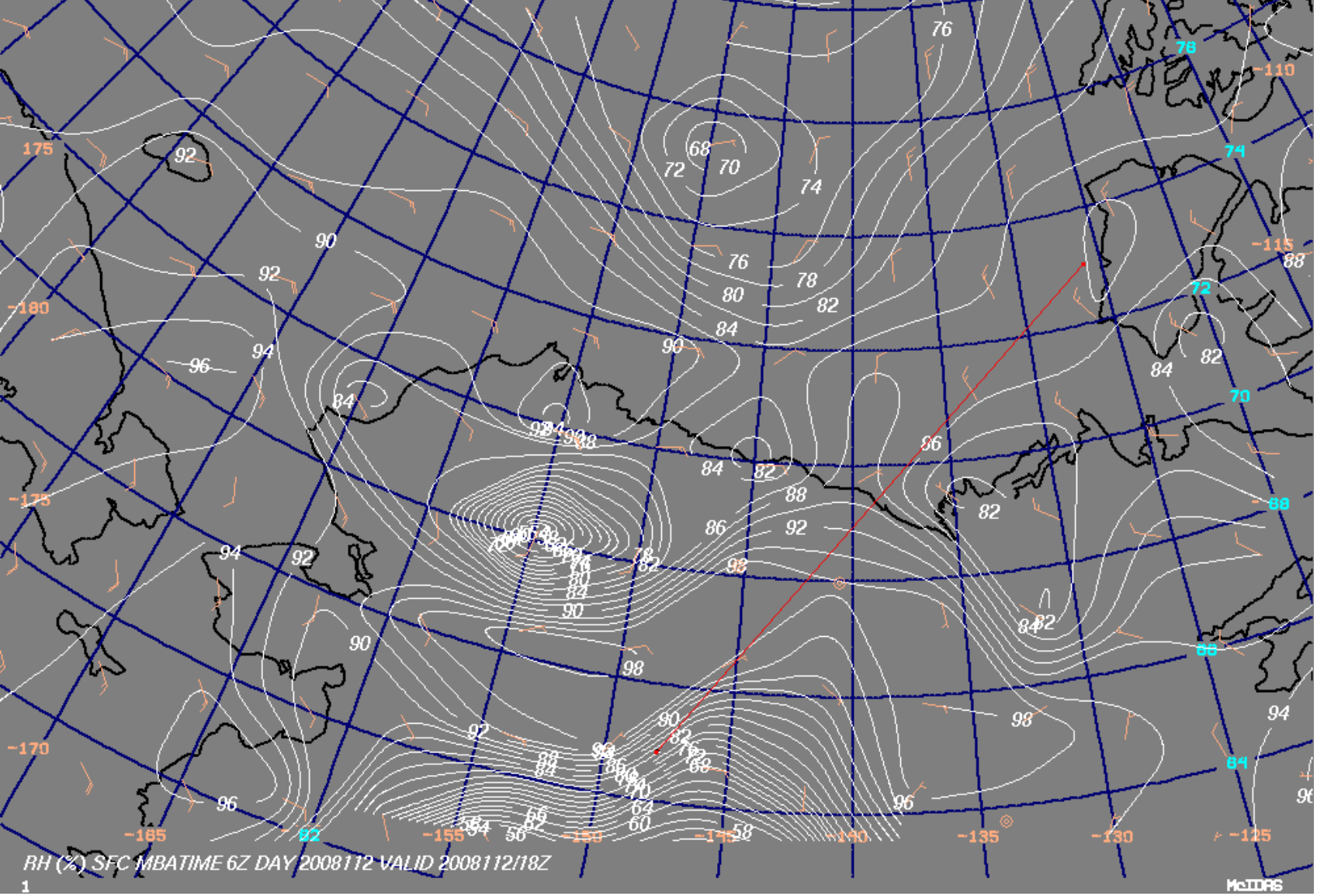
4:00 PM local, Monday, surface dewpoint and winds



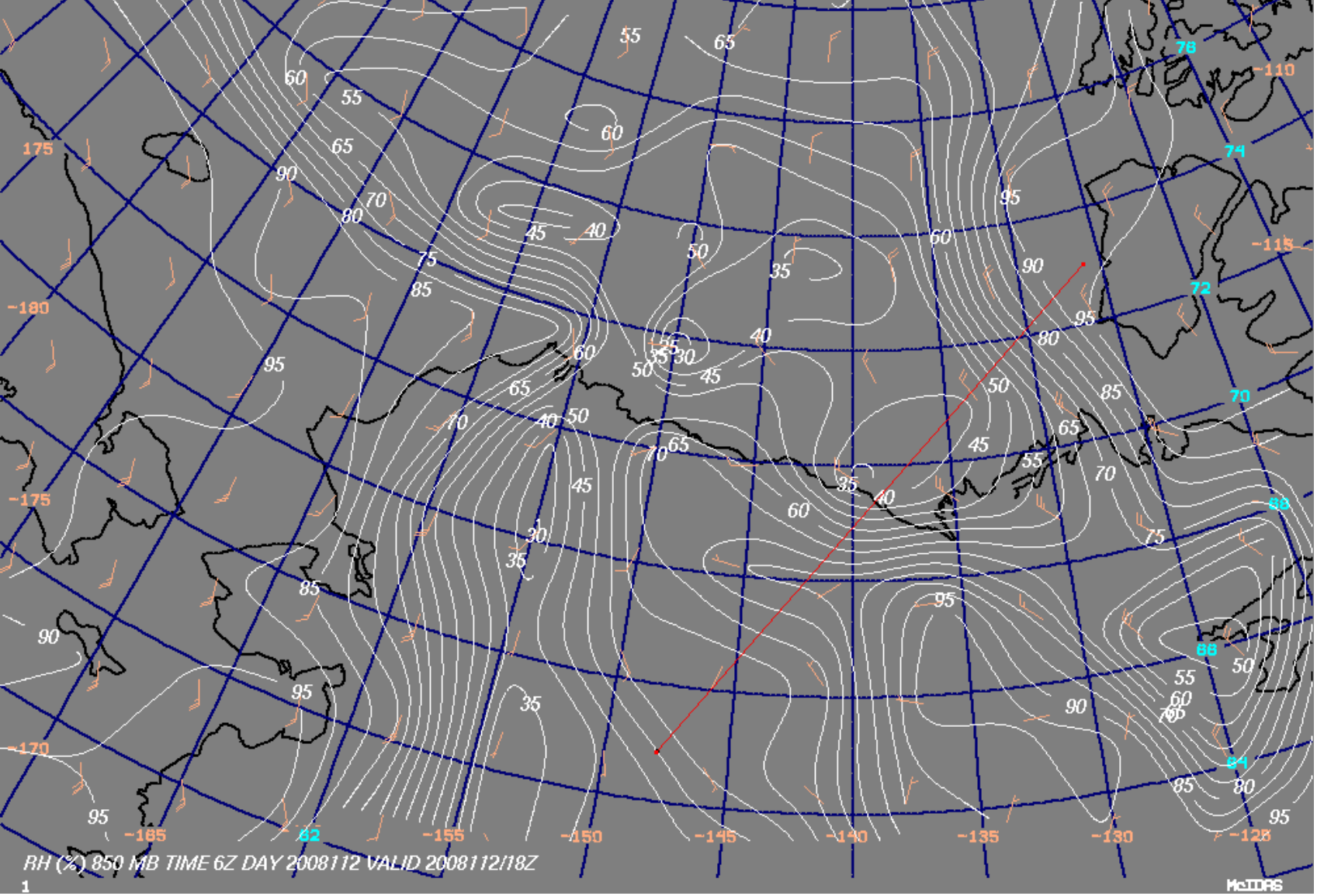
4:00 PM local, Monday, 850 hPa dewpoint and winds



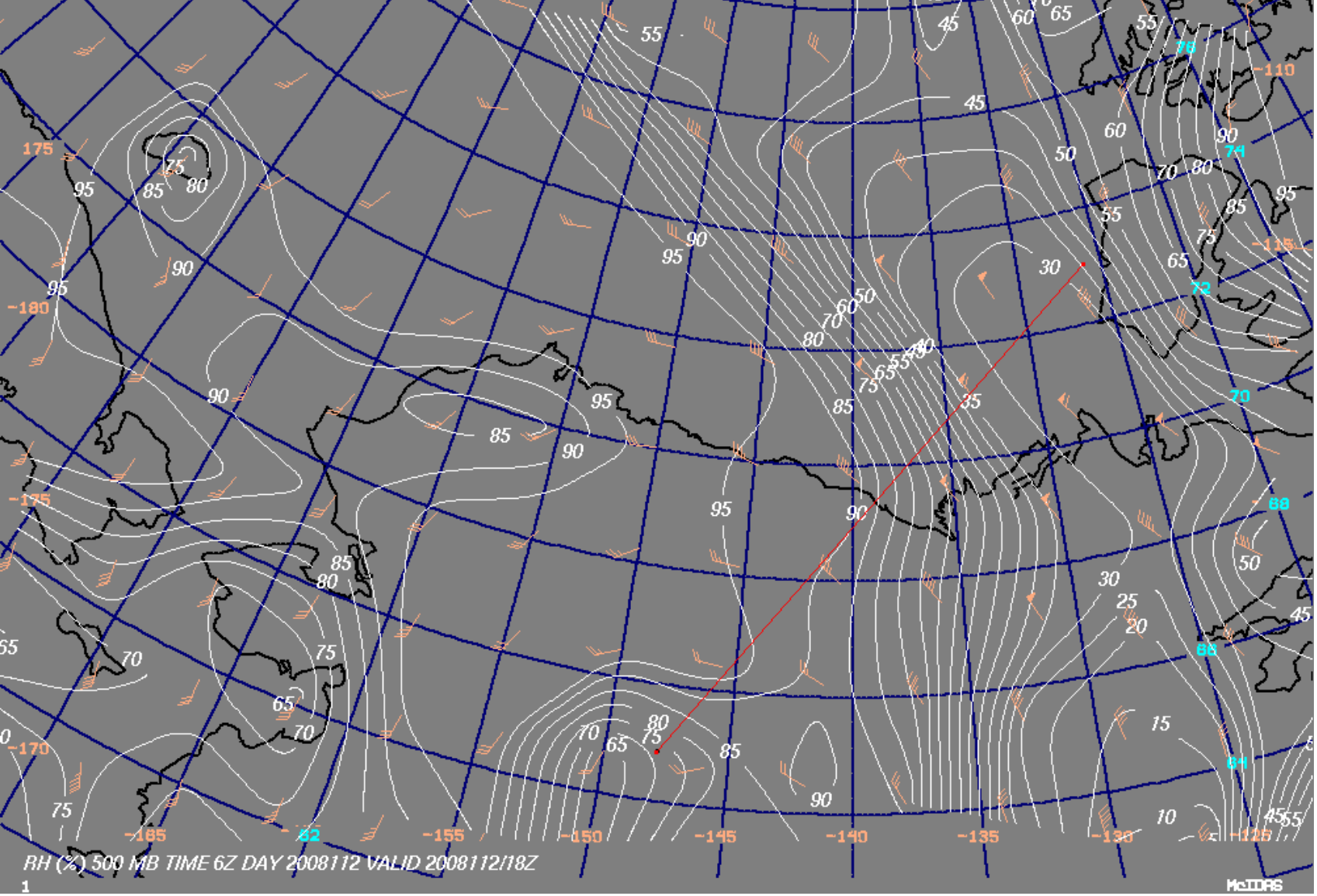
4:00 PM local, Monday, 500 hPa dewpoint and winds



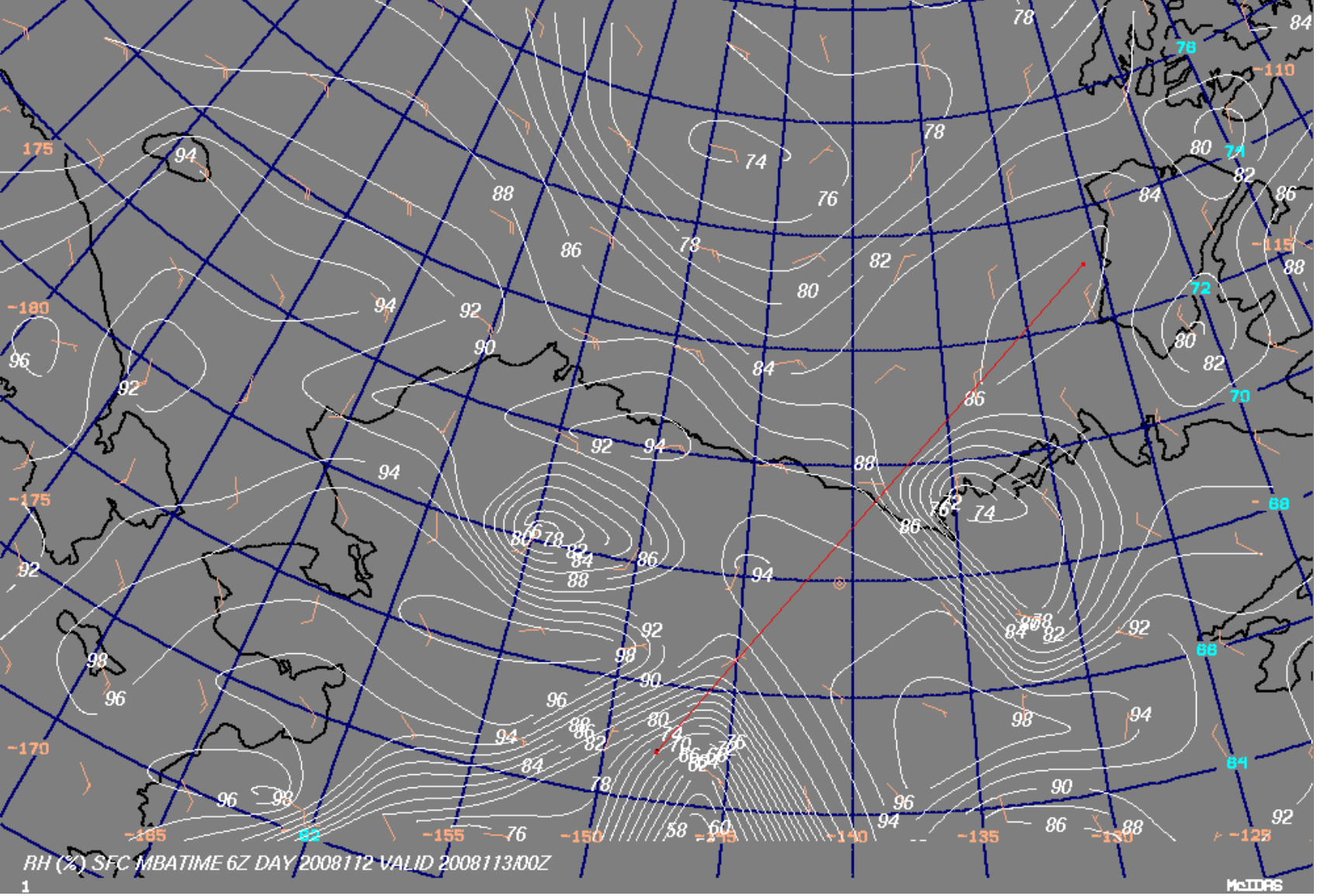
10:00 AM local, Monday, surface RH and winds



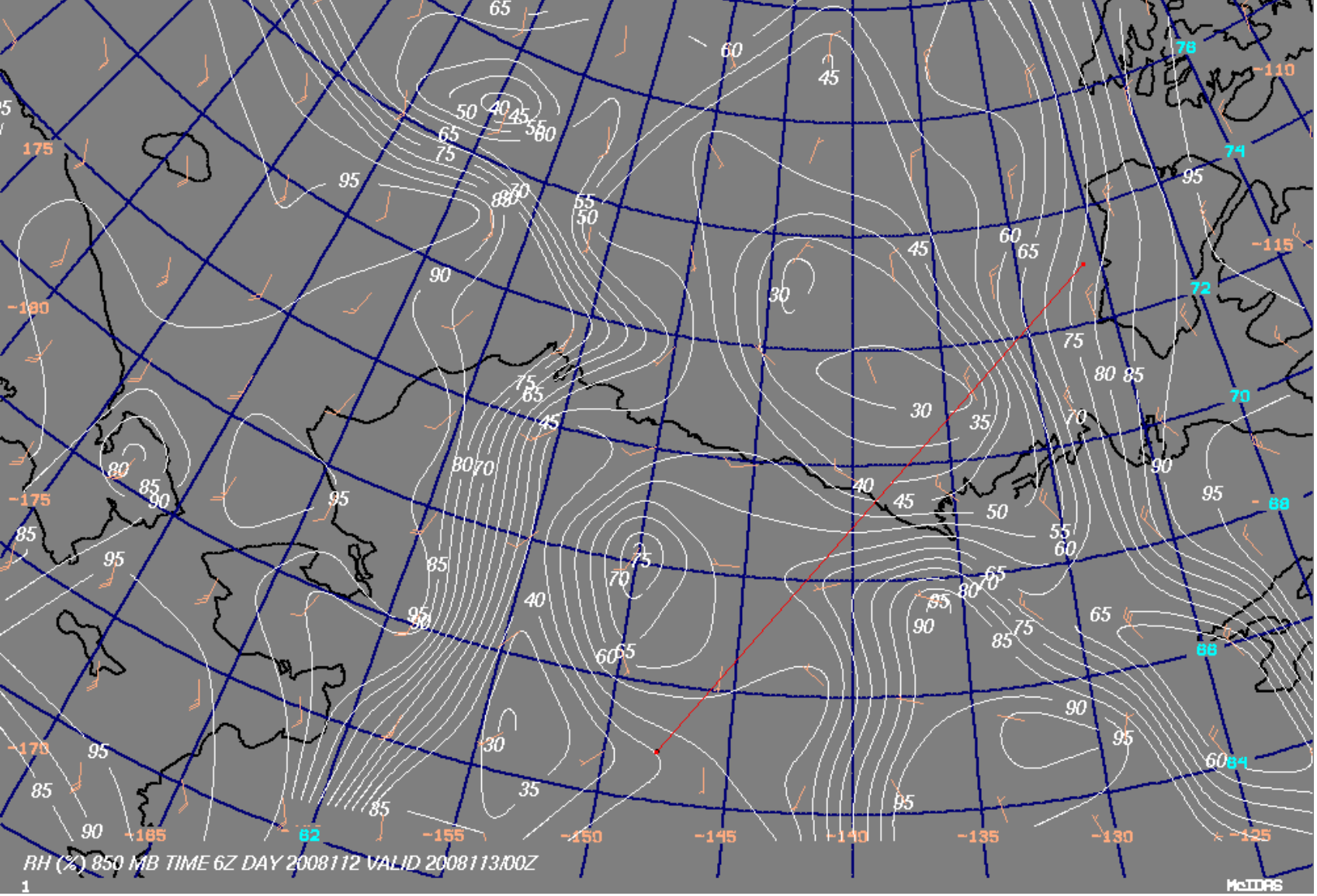
10:00 AM local, Monday, 850 hPa RH and winds



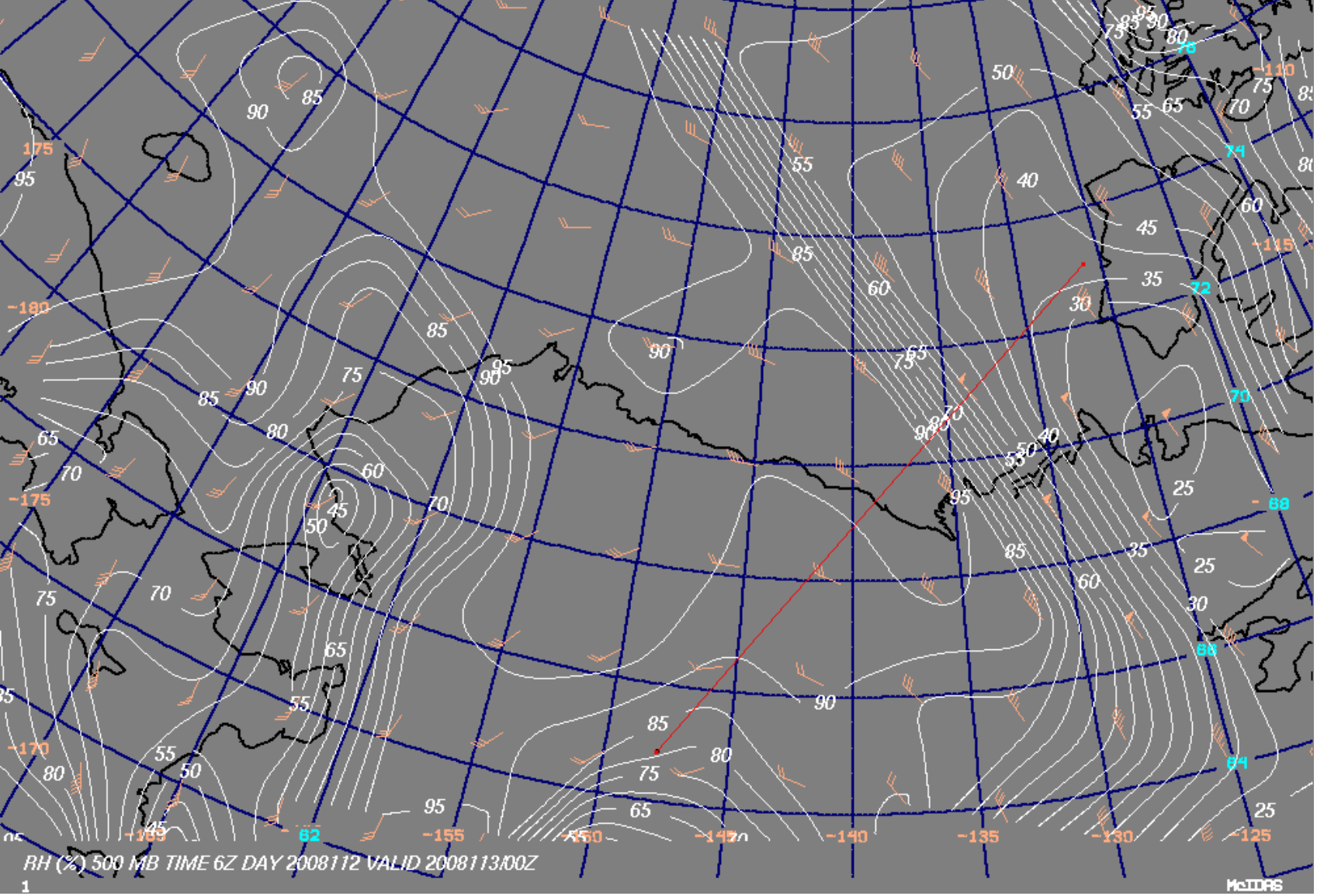
10:00 AM local, Monday, 500 hPa RH and winds



4:00 PM local, Monday, surface RH and winds



4:00 PM local, Monday, 850 hPa RH and winds



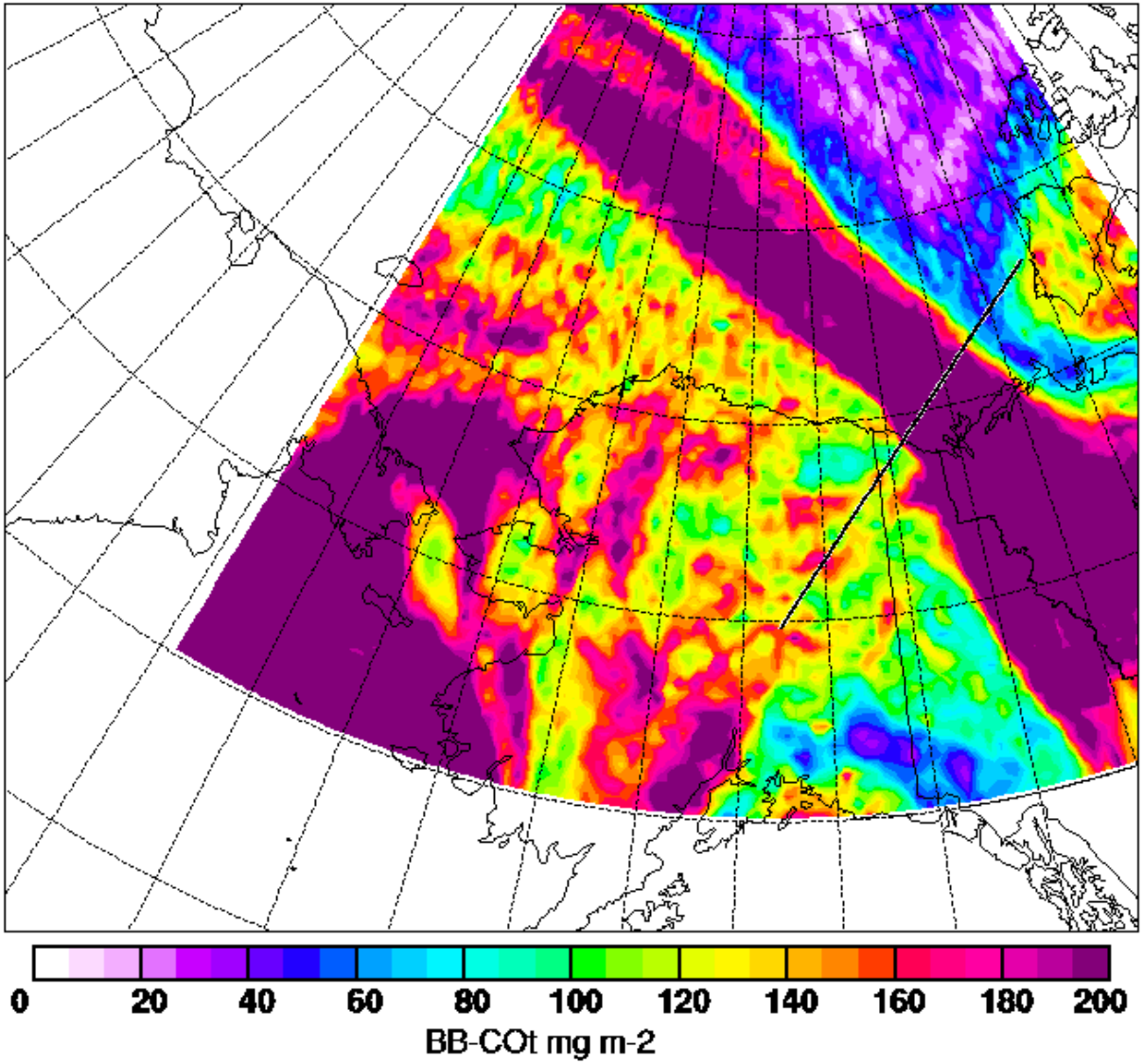
4:00 PM local, Monday, 500 hPa RH and winds

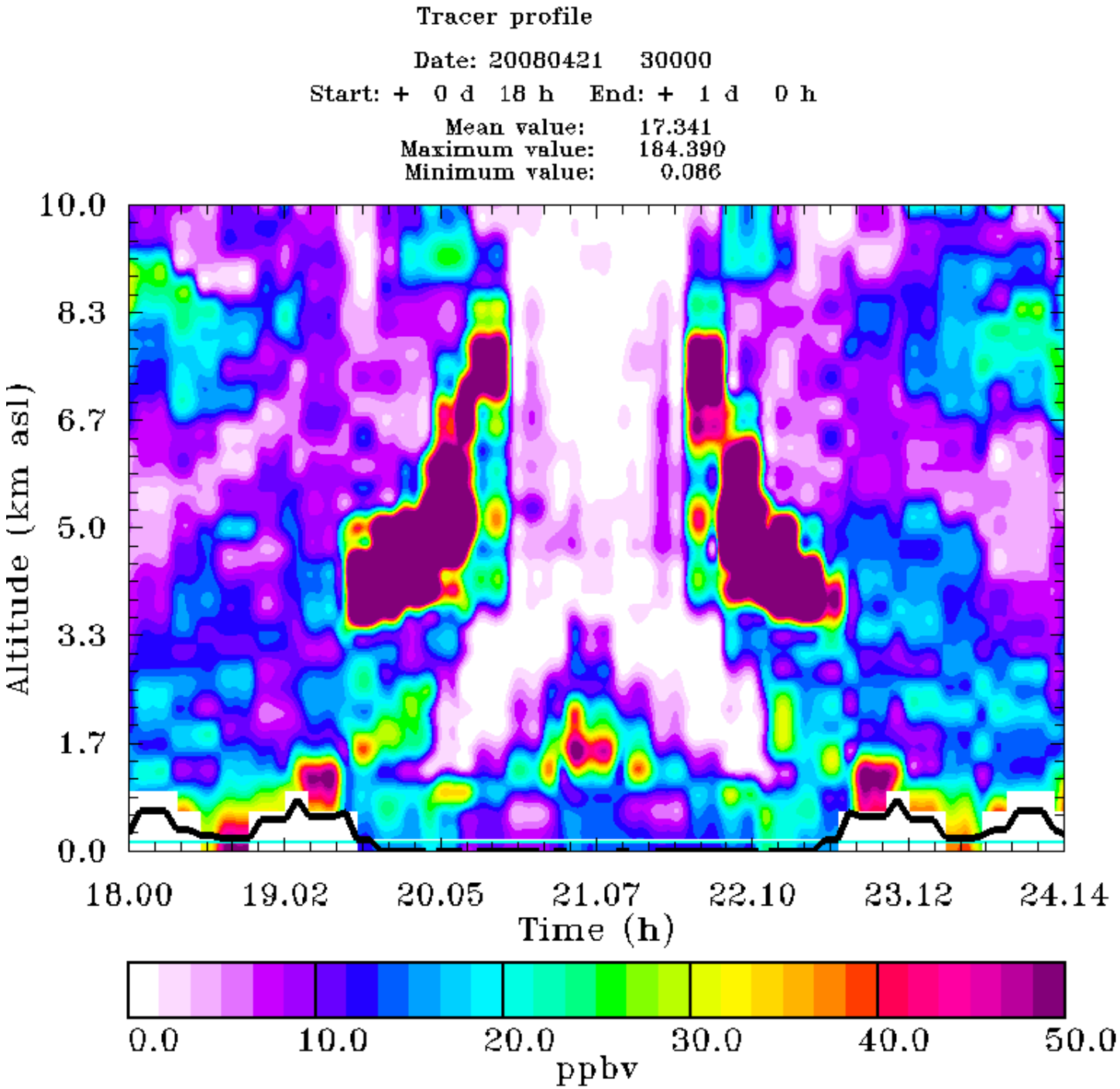
Total column of species BB-COt for age class 0 - 20.00 DAYS

Latest analysis time 20080421. 0 Actual time 20080421.210000

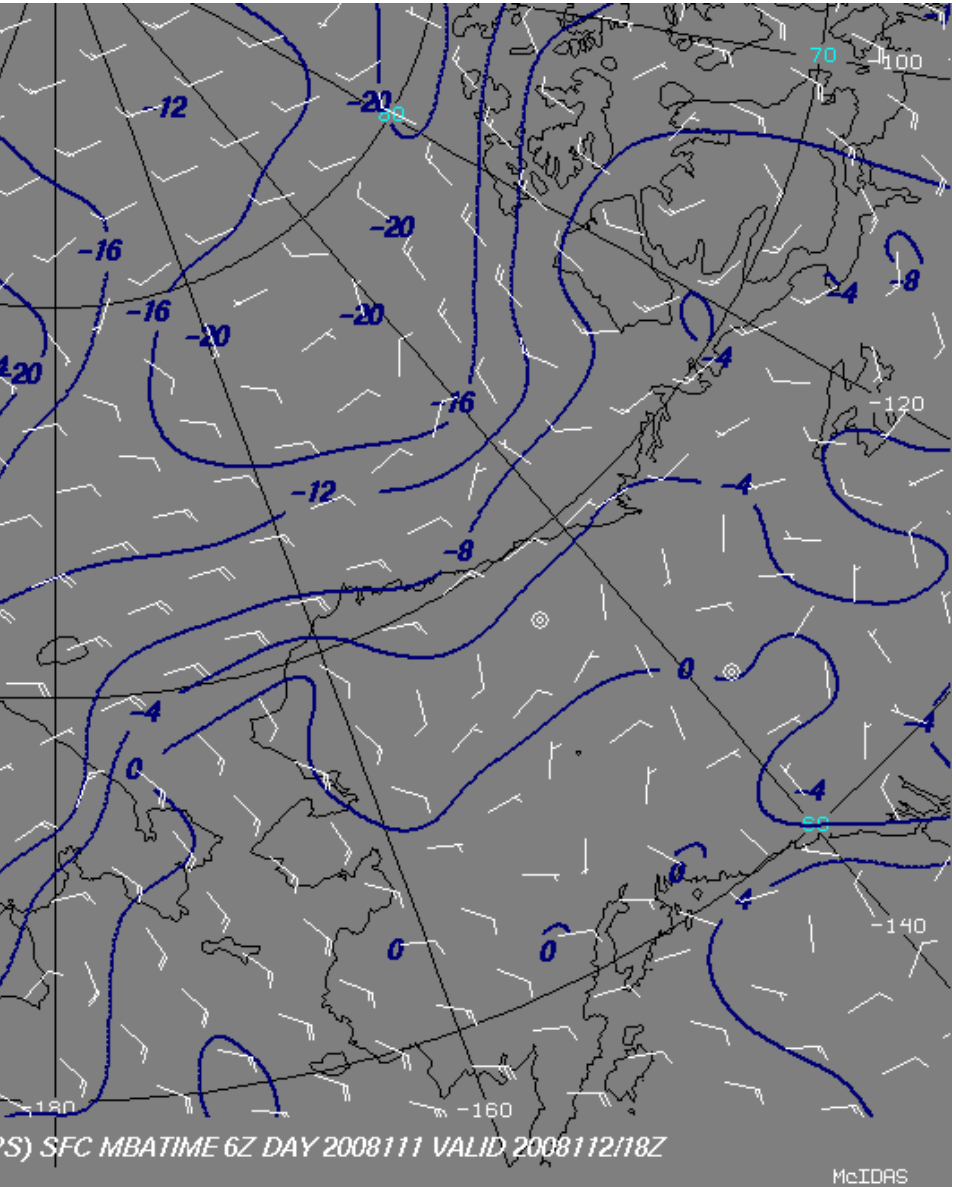
Mean value 0.129E+03 Maximum value 0.535E+03 Minimum value 0.000E+00

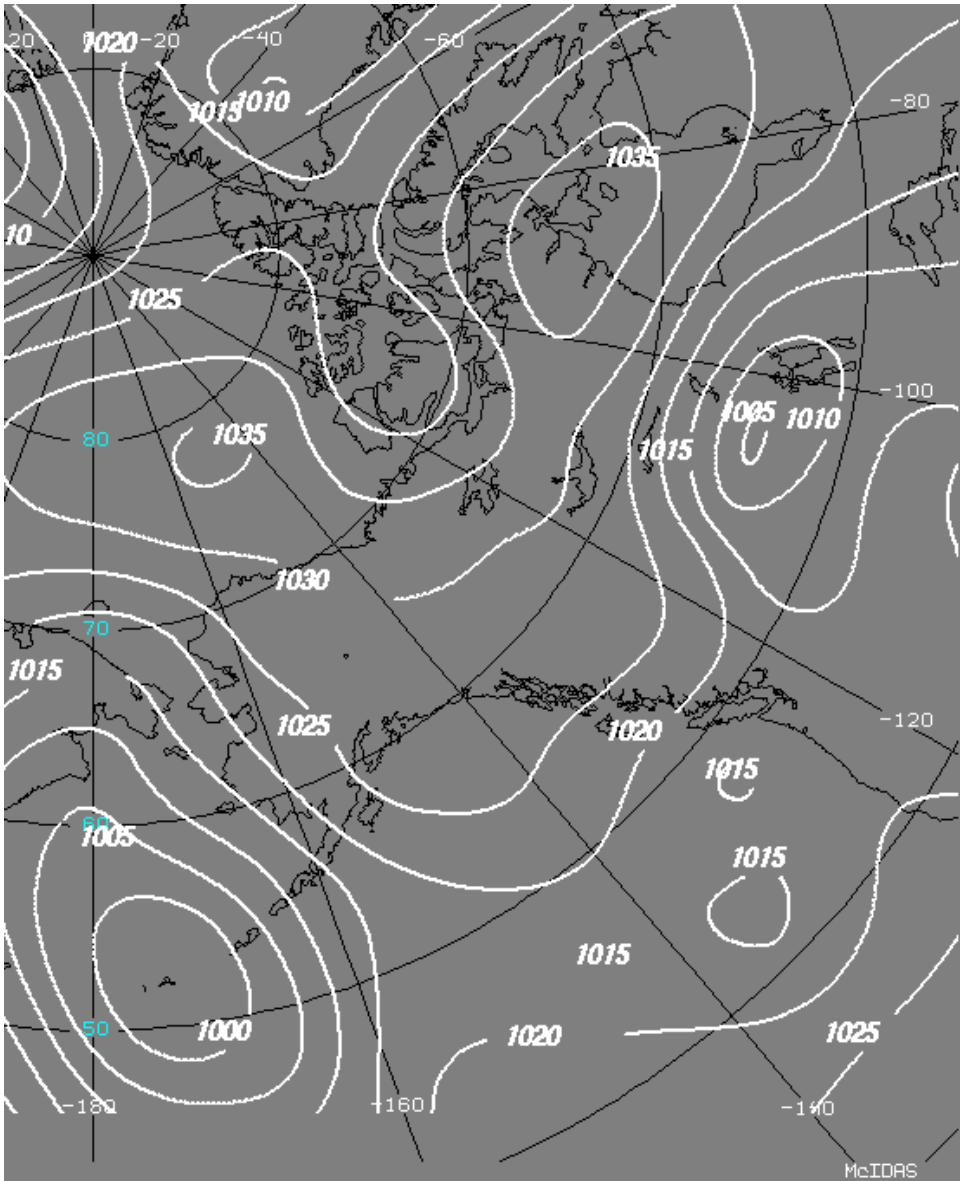
Distance of grid lines 5.0 deg



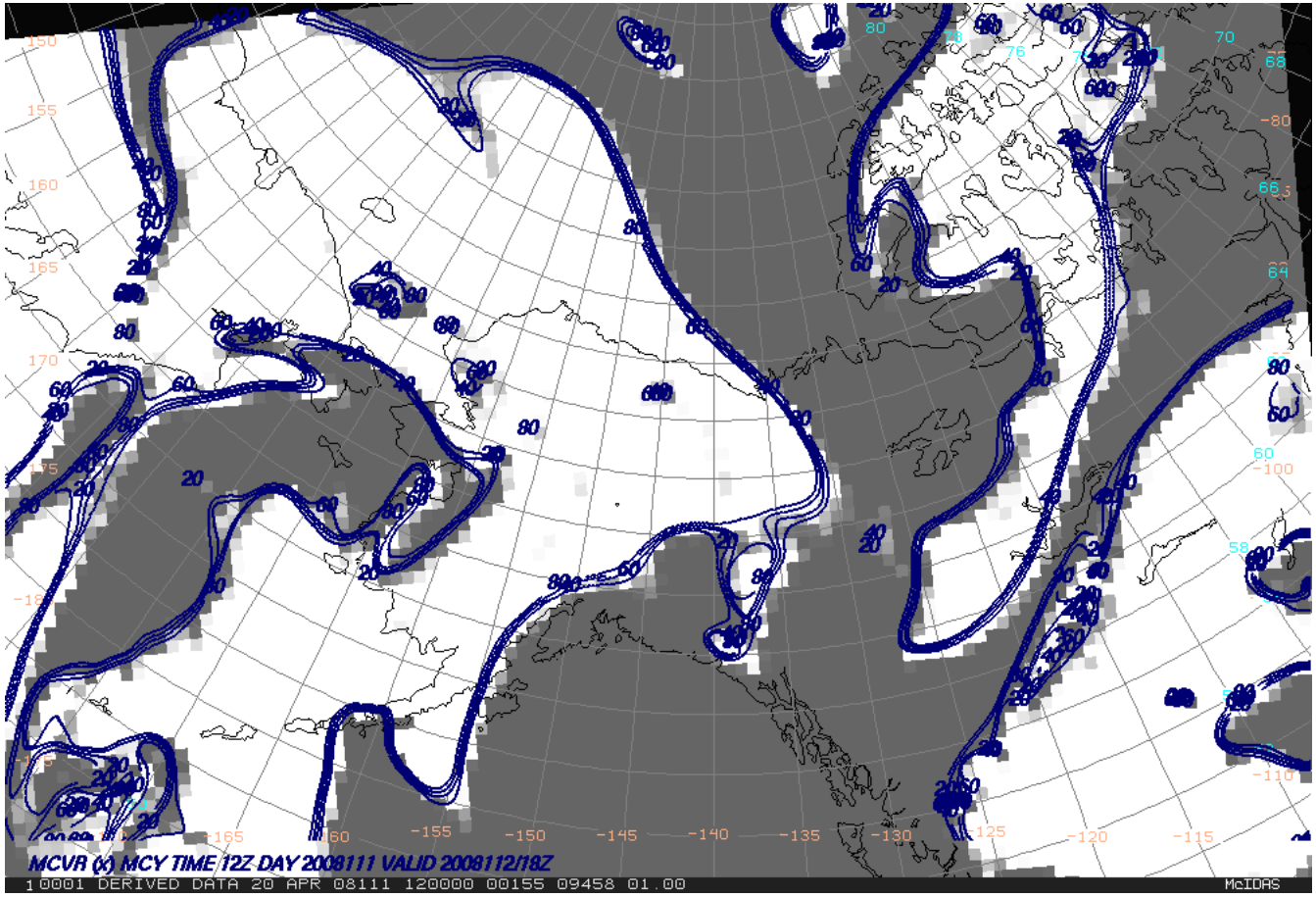

Tracer profile
Date: 20080421 30000
Start: + 0 d 18 h End: + 1 d 0 h
Mean value: 17.341
Maximum value: 184.390
Minimum value: 0.086
Altitude (km asl)
10.0
8.3
6.7
5.0
3.3
1.7
0.0
18.00
19.02
20.05
21.07
22.10
23.12
24.14
Time (h)
0.0
10.0
20.0
30.0
40.0
50.0
ppbv

Mon. 10am

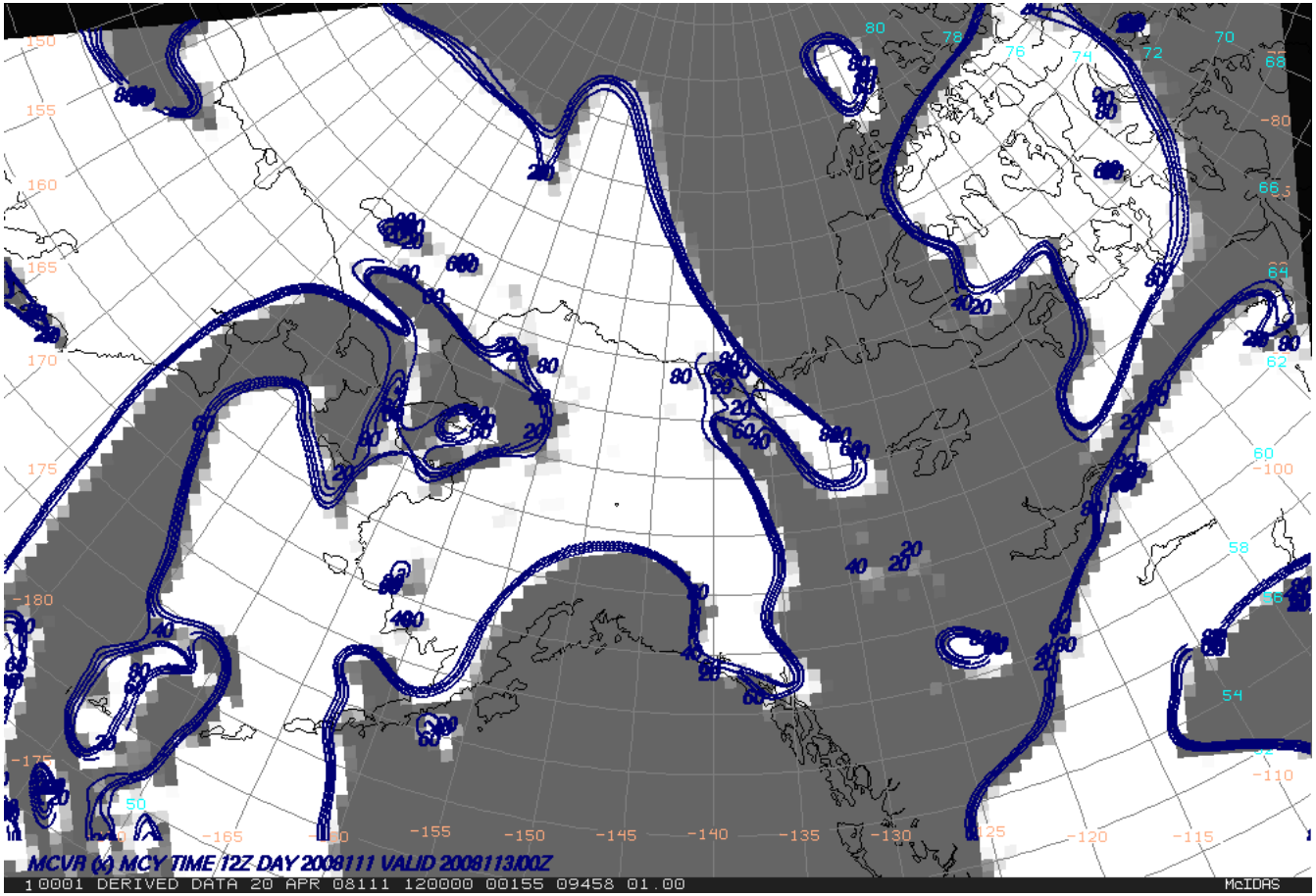

PS) SFC MBATIME 6Z DAY 2008111 VALID 2008112/18Z
McIDAS


McIDAS

Cloud cover, Mon. 10am

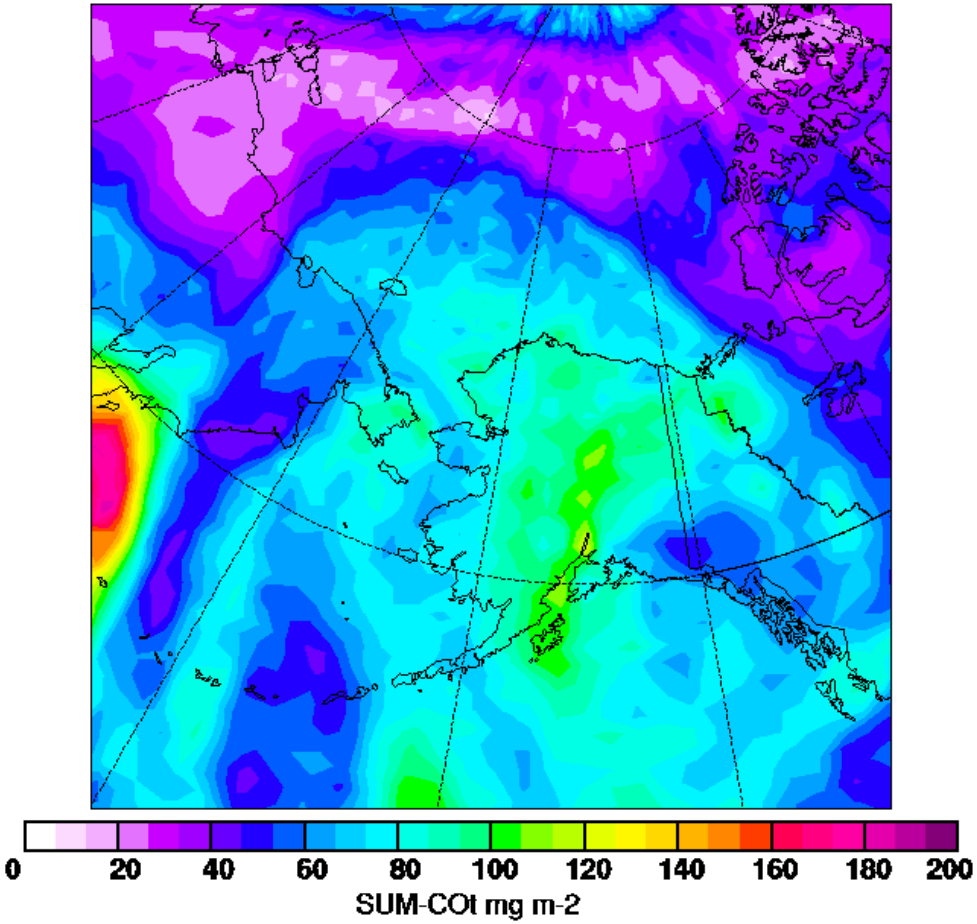


Cloud cover, Mon. 4pm

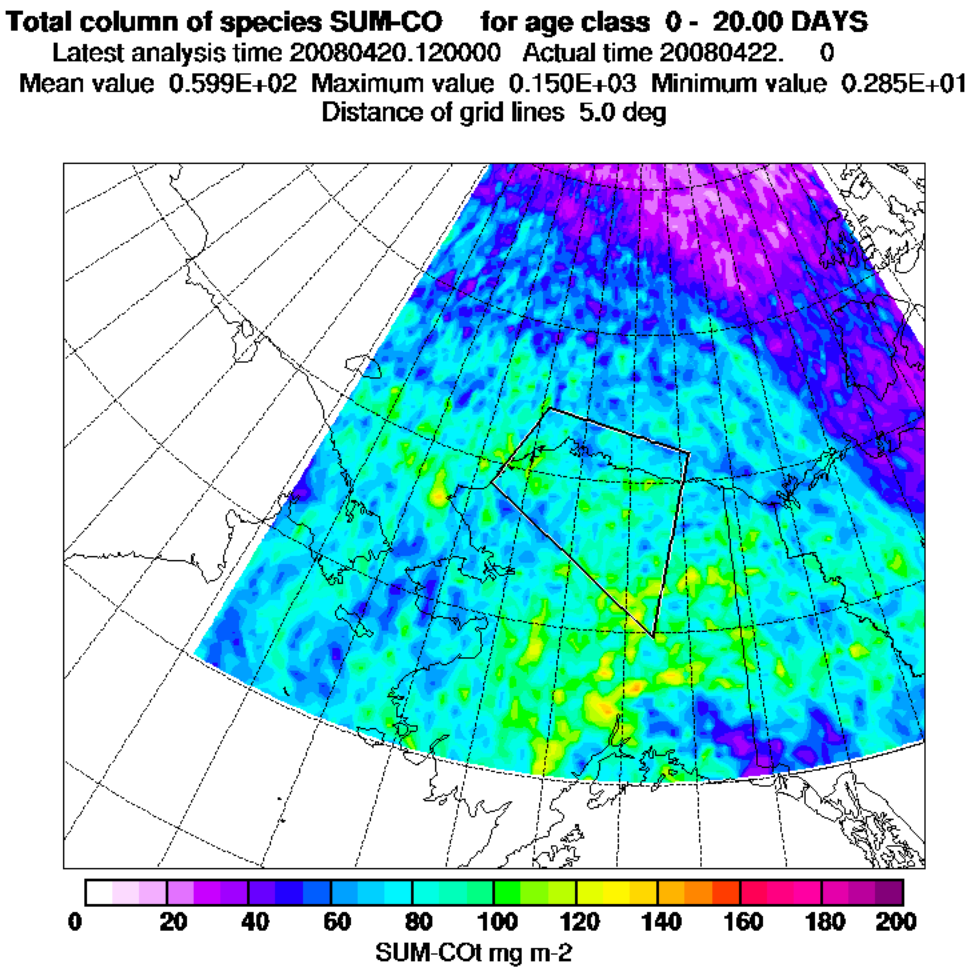


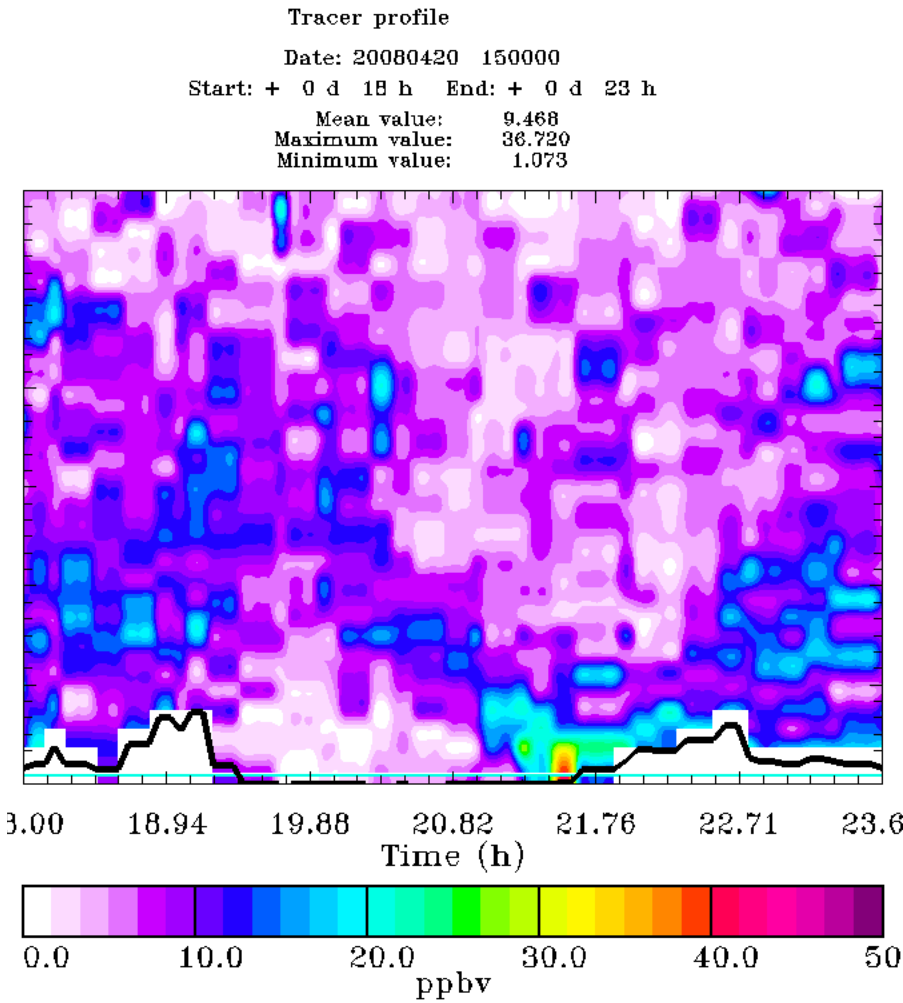
Anthropo CO: Mon. 10am to midnight

Total column of species SUM-CO for age class 0 - 20.00 DAYS
Latest analysis time 20080420.120000 Actual time 20080421.180000
Mean value 0.917E+02 Maximum value 0.662E+03 Minimum value 0.112E+02
Distance of grid lines 20.0 deg

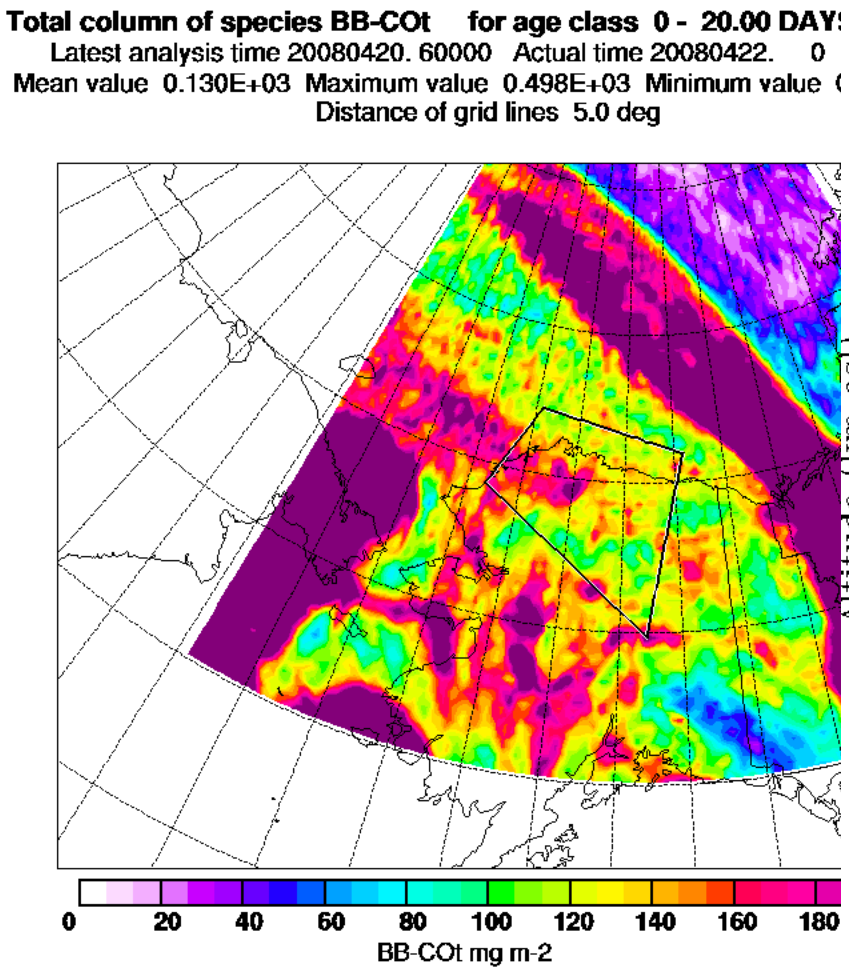


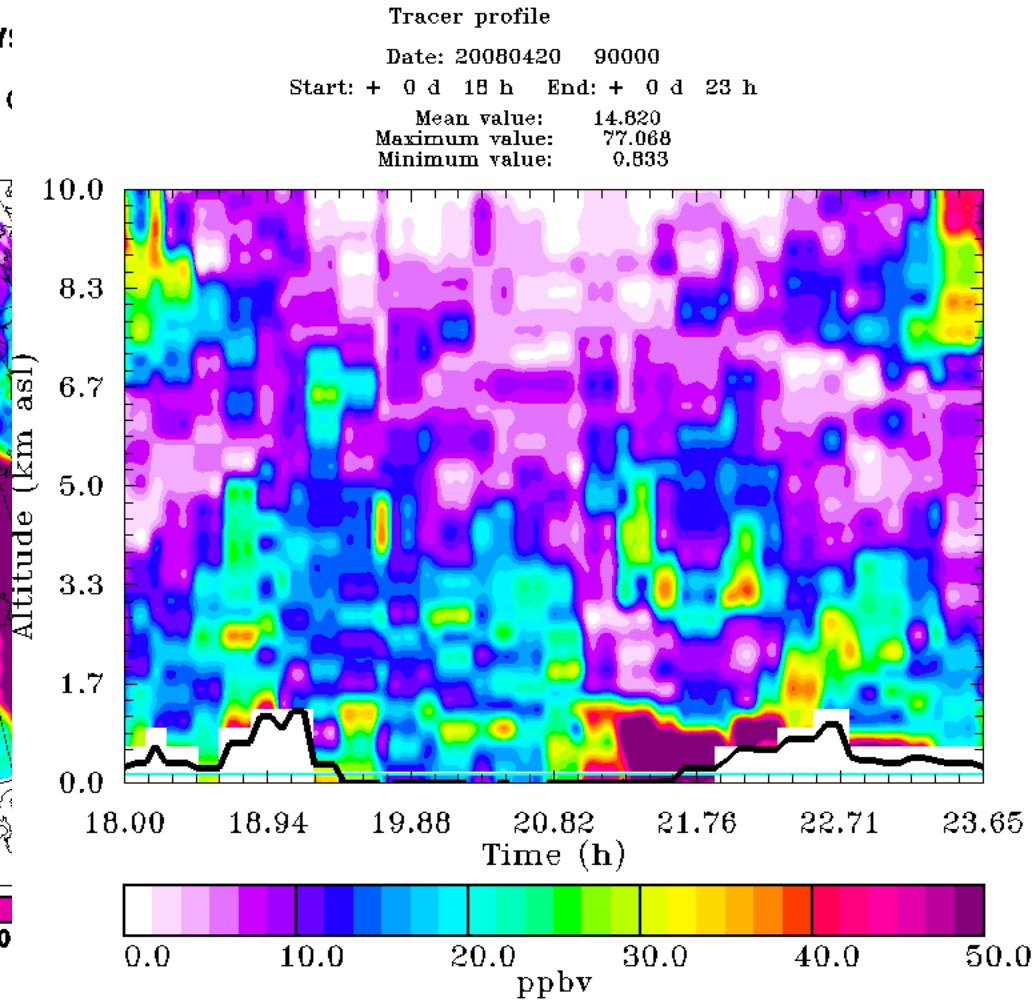
Anthropo. CO, 4pm



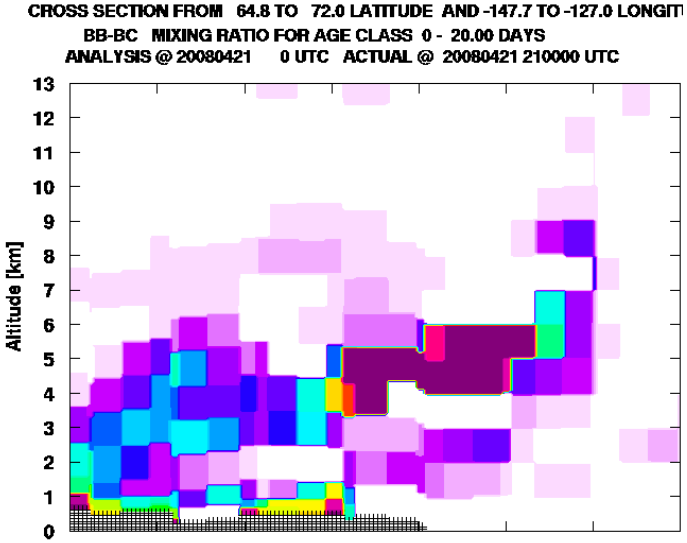


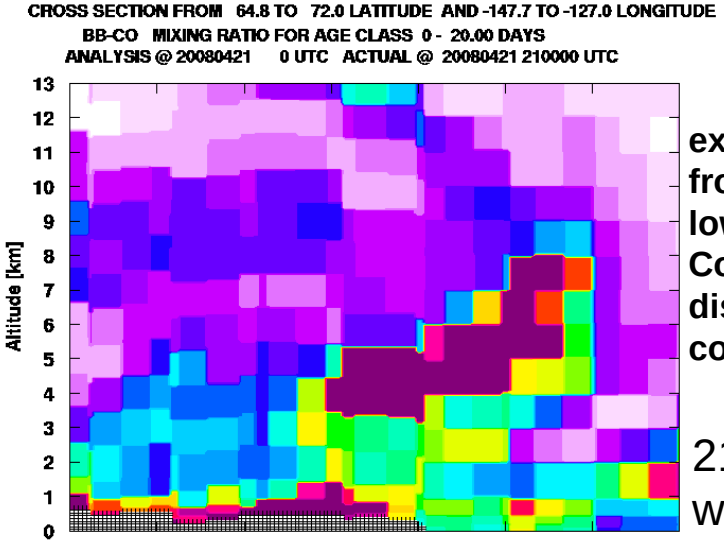
BB CO, 4pm


Total column of species BB-COt for age class 0 - 20.00 DAYS
Latest analysis time 20080420. 60000 Actual time 20080422. 0
Mean value 0.130E+03 Maximum value 0.498E+03 Minimum value
Distance of grid lines 5.0 deg
0
20
40
60
80
100
120
140
160
180
BB-COt mg m-2


Tracer profile
Date: 20080420 90000
Start: + 0 d 18 h End: + 0 d 23 h
Mean value: 14.820
Maximum value: 77.068
Minimum value: 0.833
Altitude (km asl)
10.0
8.3
6.7
5.0
3.3
1.7
0.0
18.00
18.94
19.88
20.82
21.76
22.71
23.65
Time (h)
0.0
10.0
20.0
30.0
40.0
50.0
ppbv

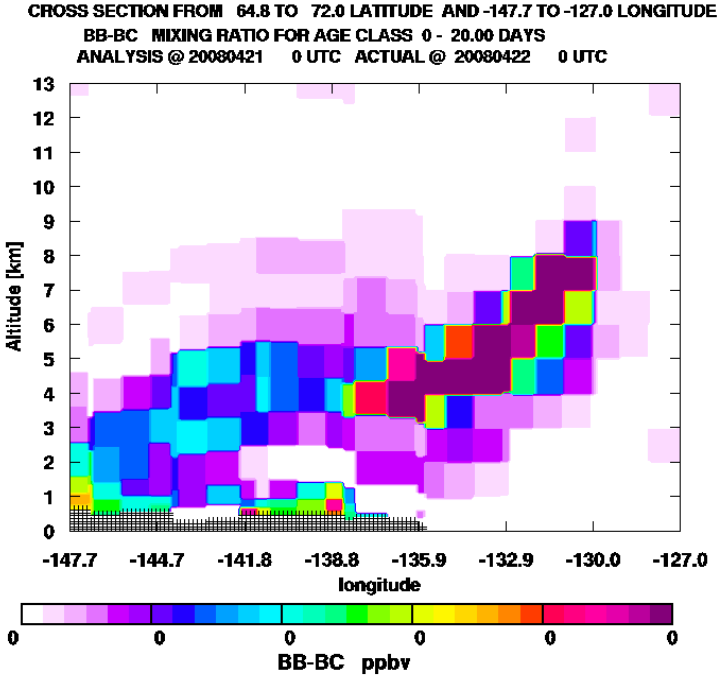
biomass BC biomass CO

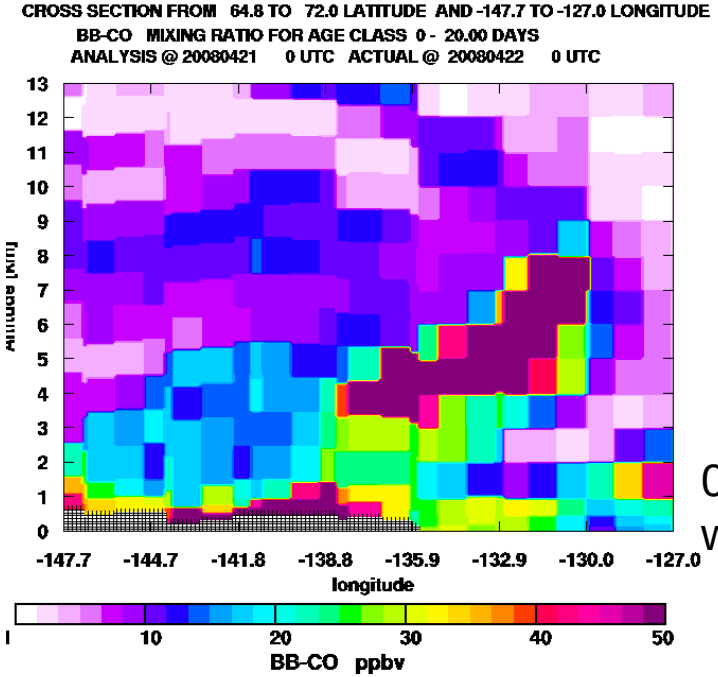




expect BC along "sloping front", but CO also at lower and surface levels. Coincident with the disappearing stratus cover in Owen's figures?

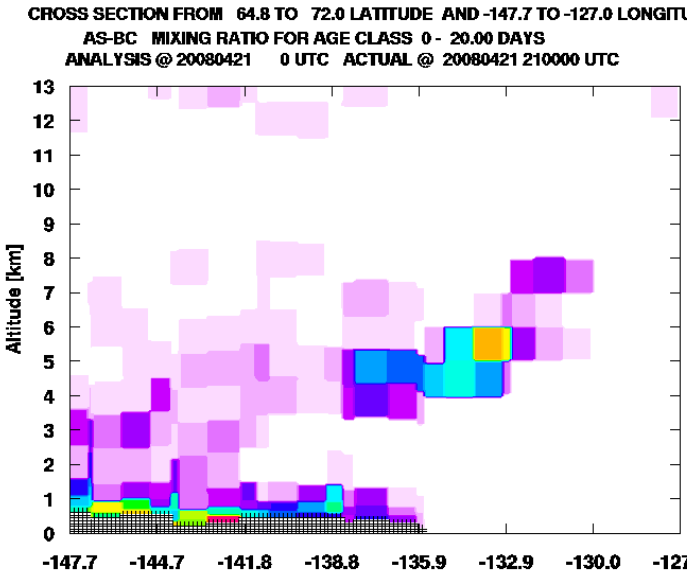
21Z 21 Apr: way out

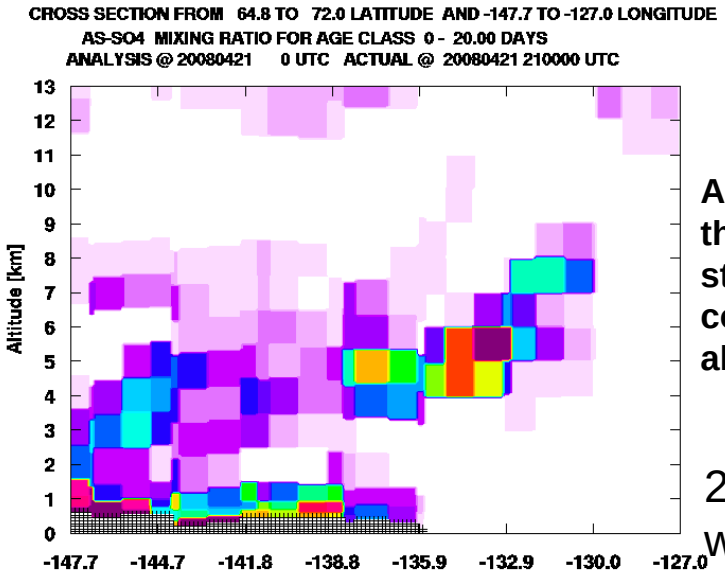




00Z 22 Apr: way back

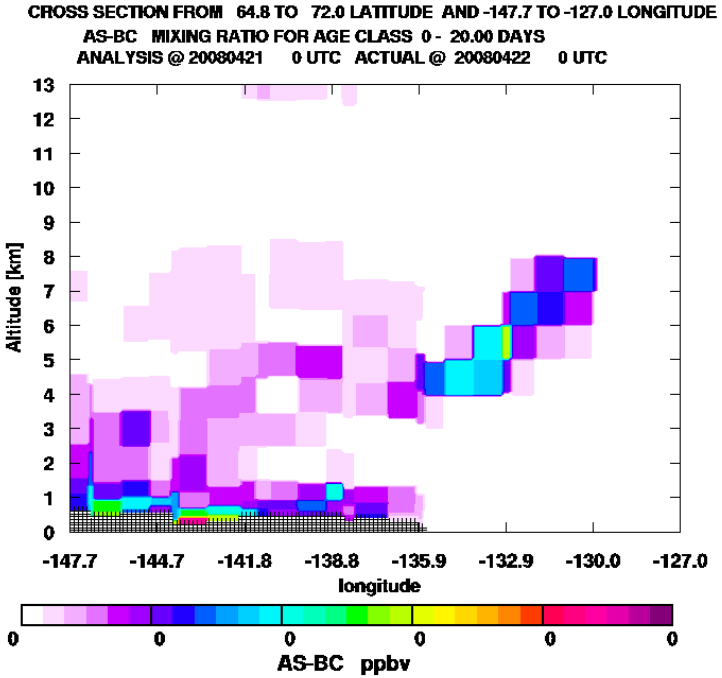
biomass BC biomass CO

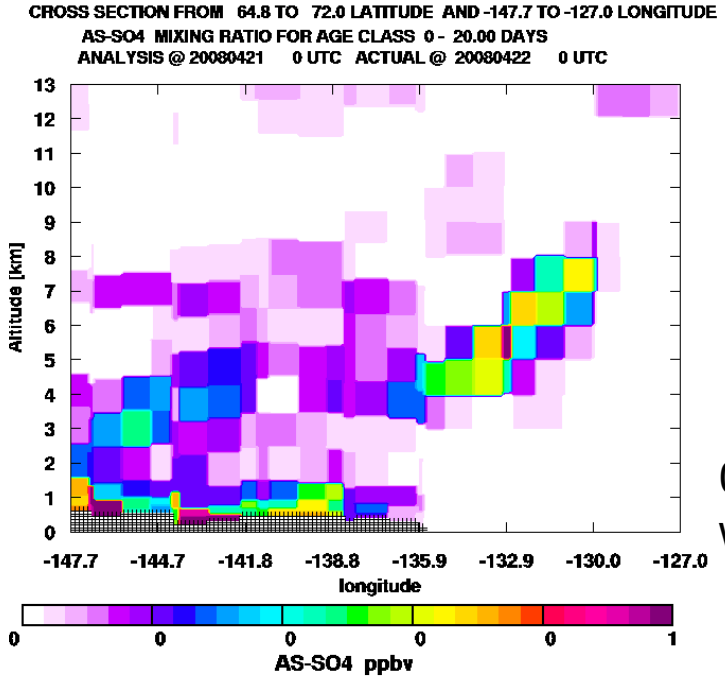




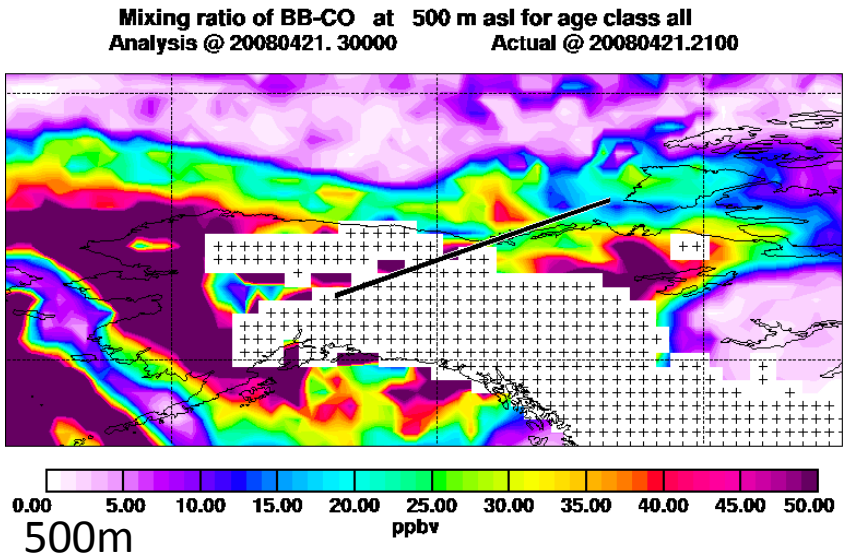
Asian pollution mixed into the biomass plume: strongest changes at the coast line, max at 5-6km altitude.

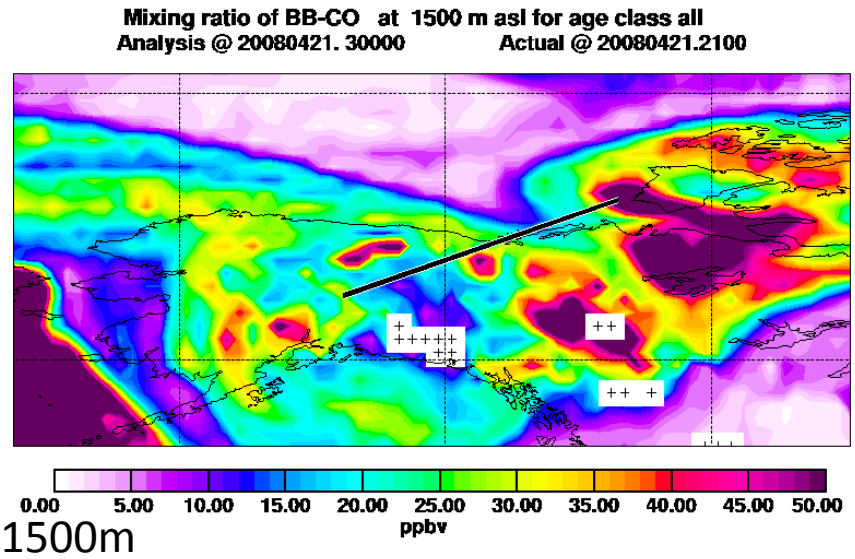
21Z 21 Apr: way out

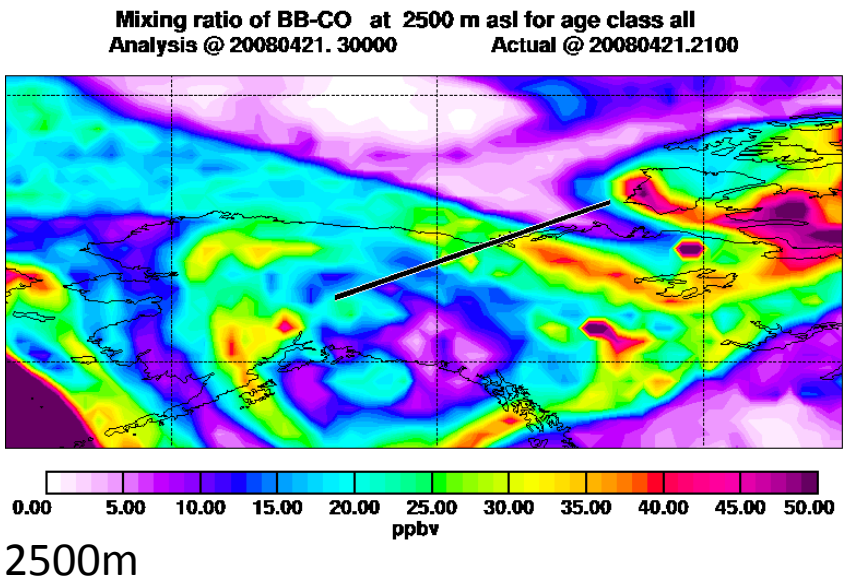


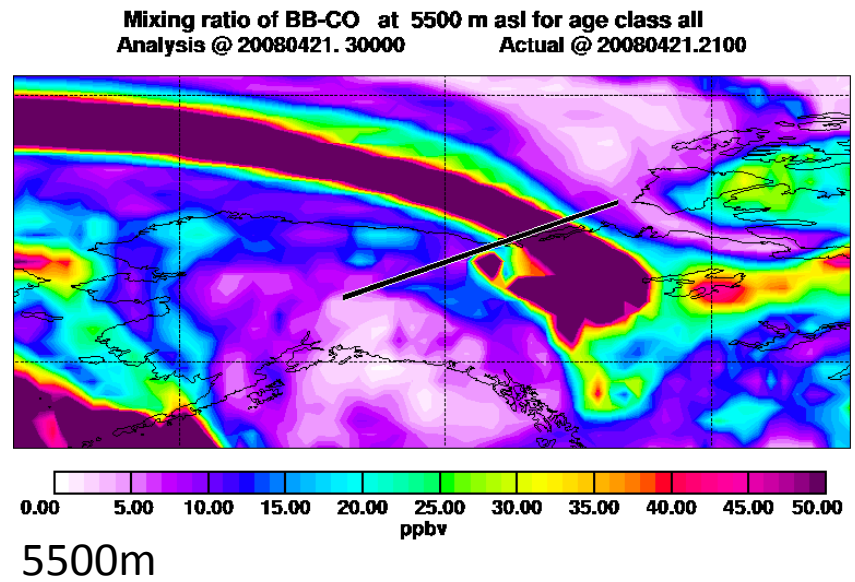


00Z 22 Apr: way back







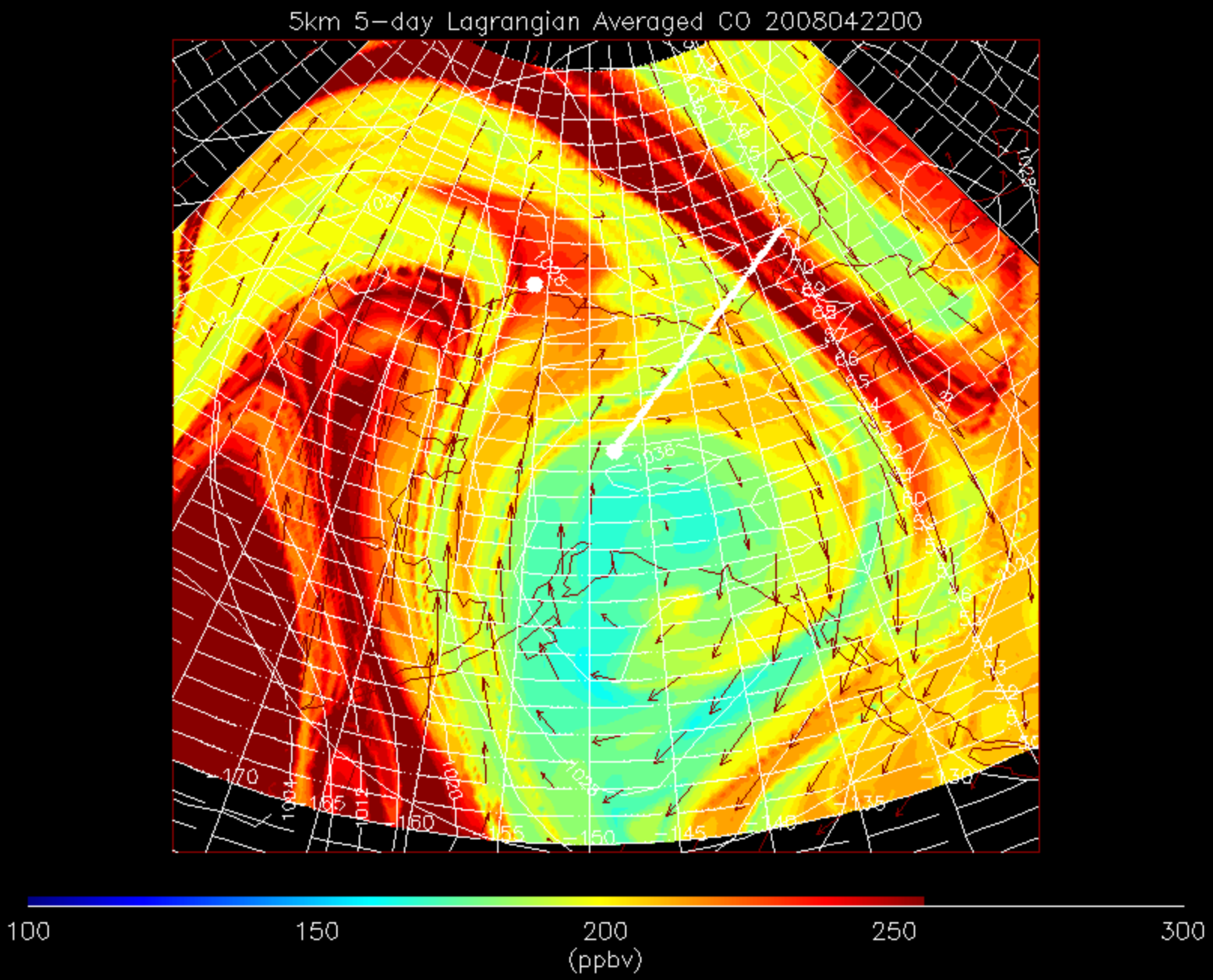


Advection from NW brings really clean air masses into NE Arctic ocean sector at 1500-2500m, some pollution could sit around at the surface. Pollution coincident with cloud cover?

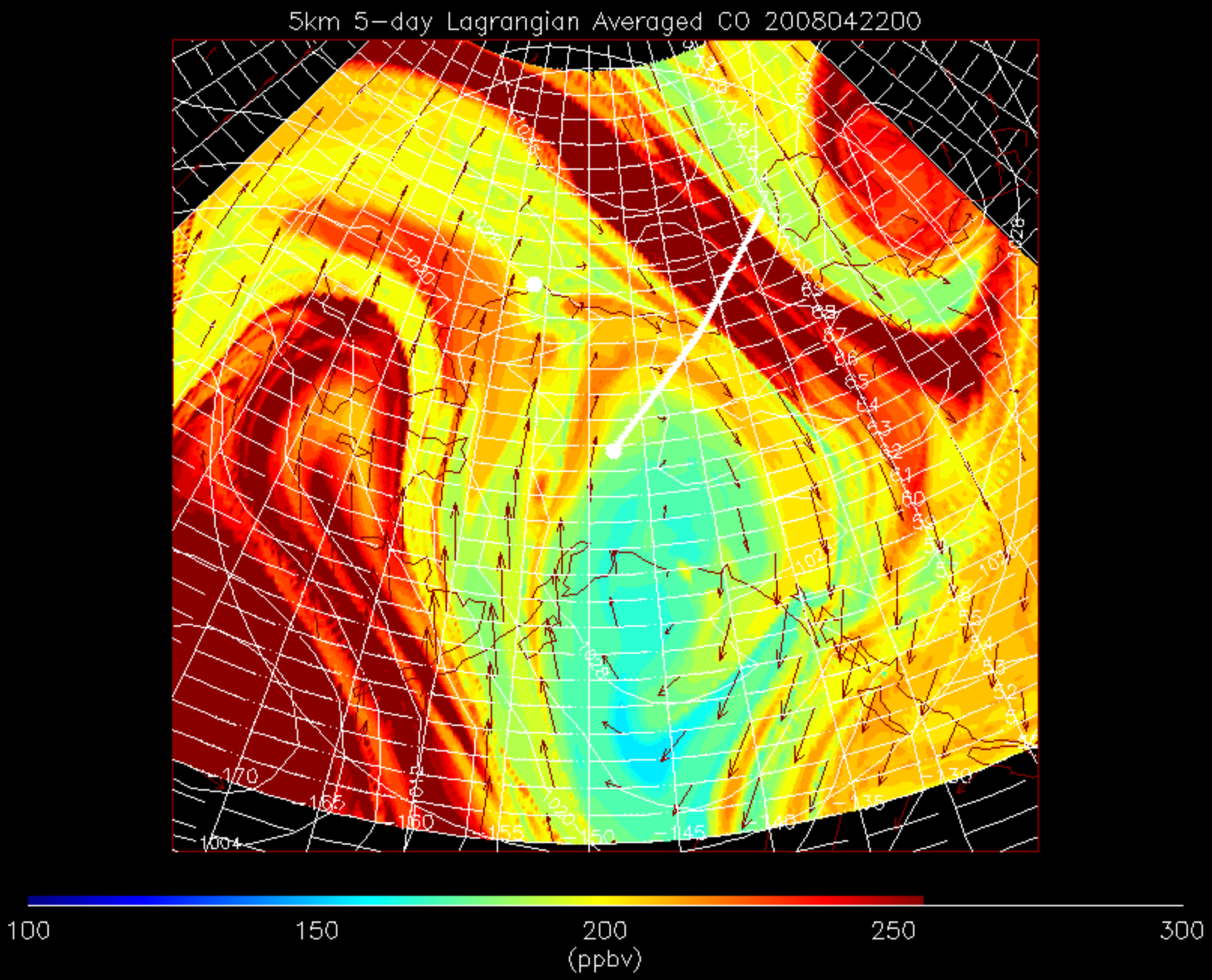
RAQMS Fairbanks Local FX Discussion:

00Z 04/22
Initialized 12Z 04/20

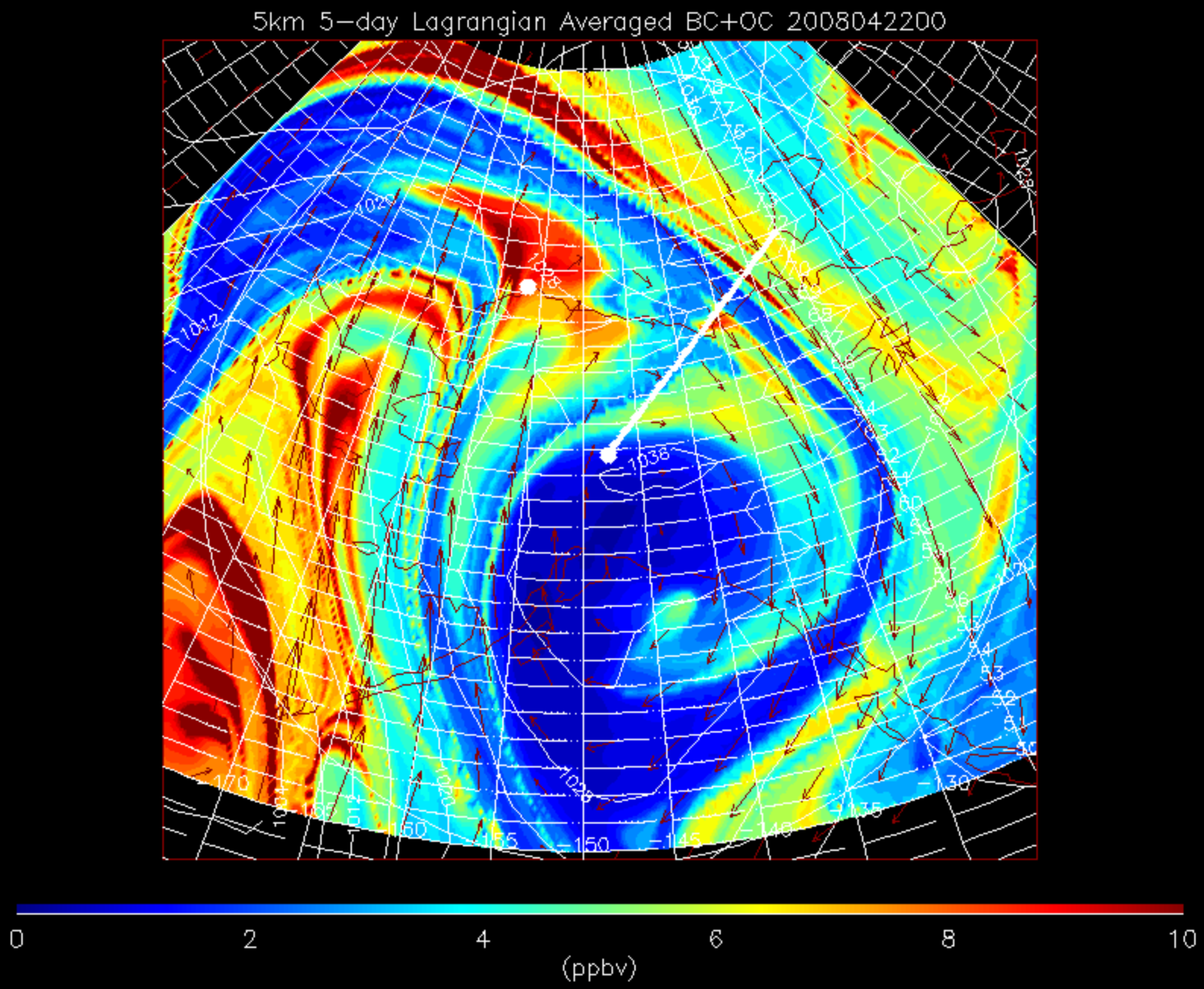
60hr FX


5km 5-day Lagrangian Averaged CO 2008042200
100
150
200
250
300
(ppbv)

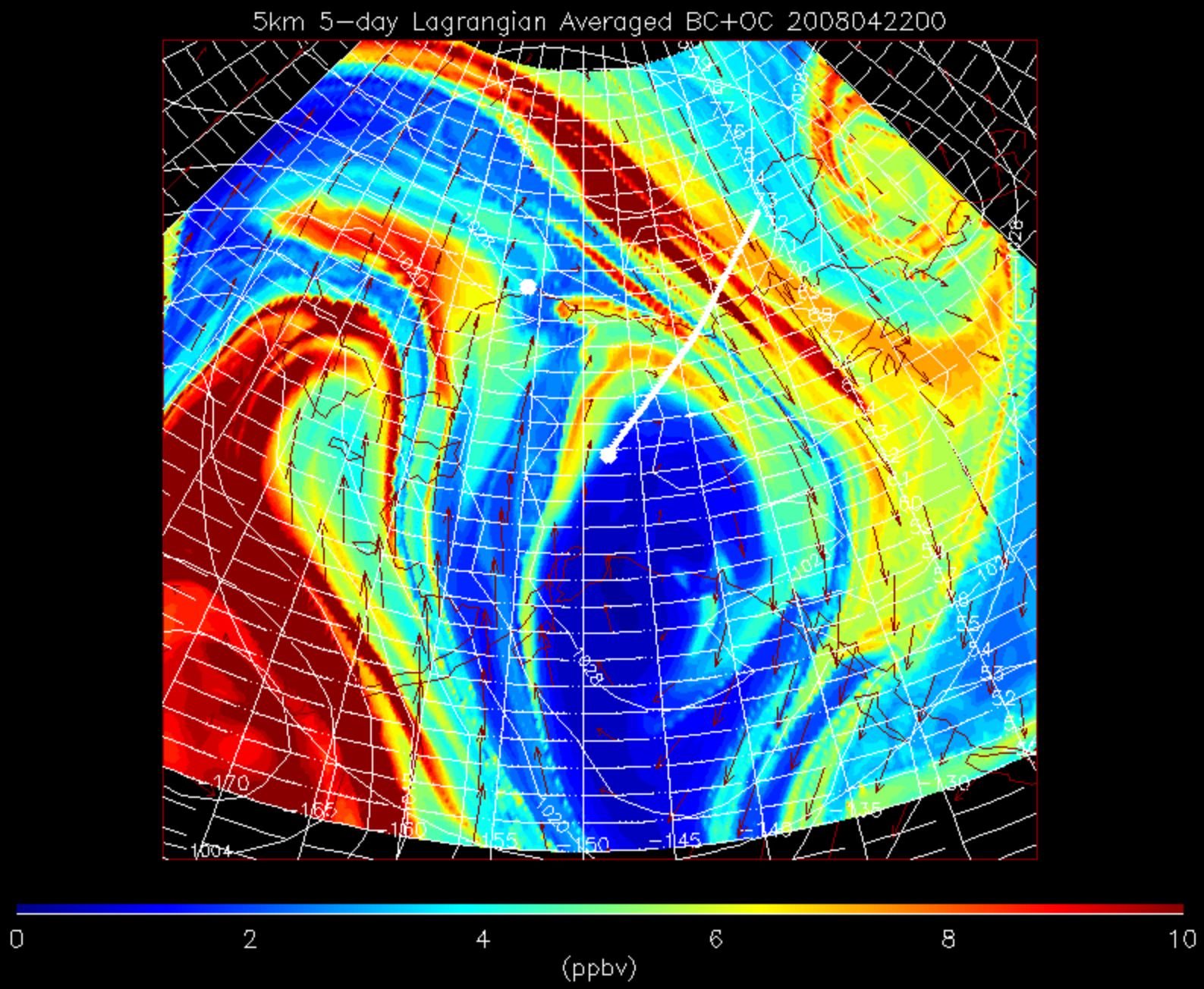
36hr FX


5km 5-day Lagrangian Averaged CO 2008042200
100
150
200
250
300
(ppbv)

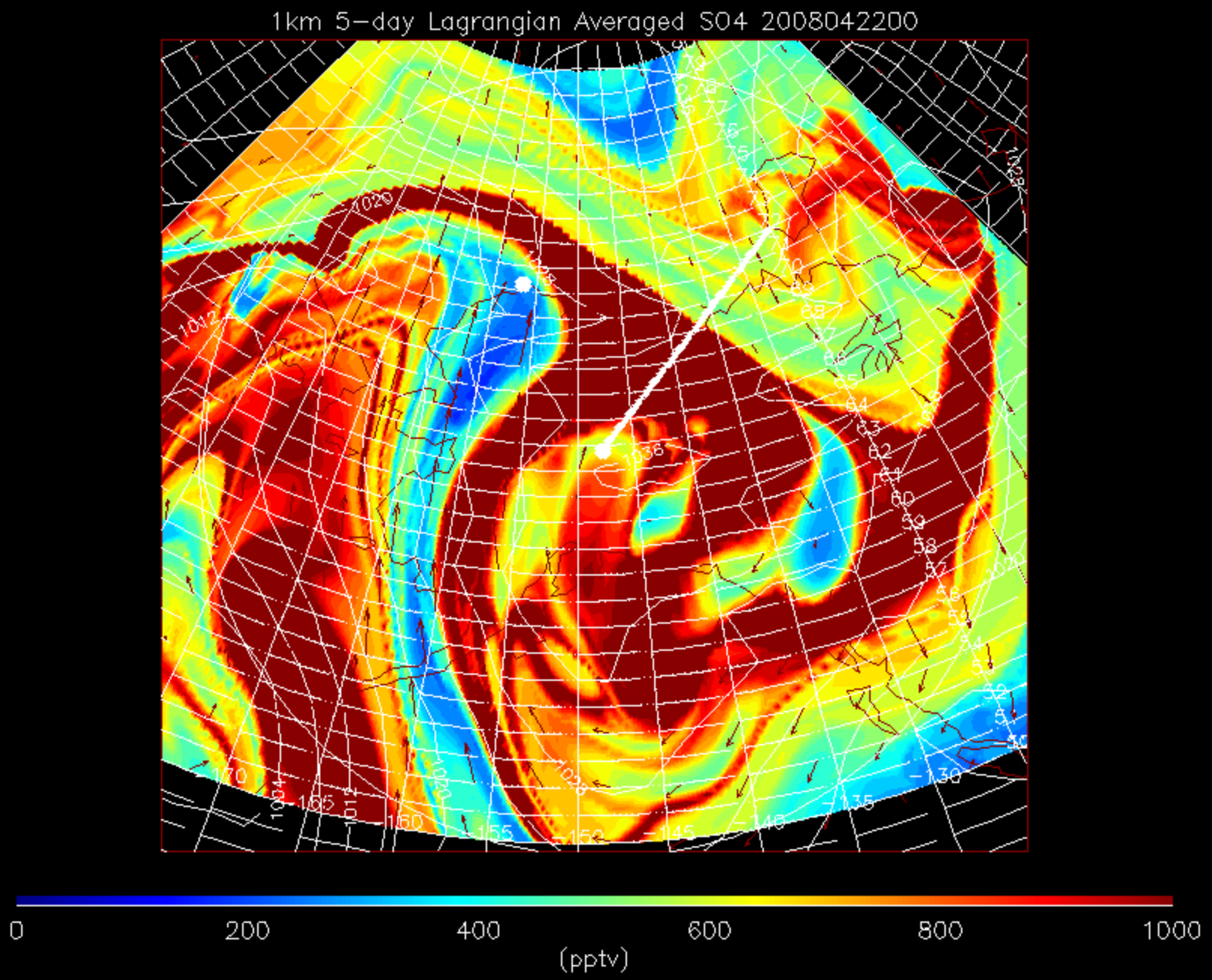
60hr FX


5km 5-day Lagrangian Averaged BC+OC 2008042200
0
2
4
6
8
10
(ppbv)

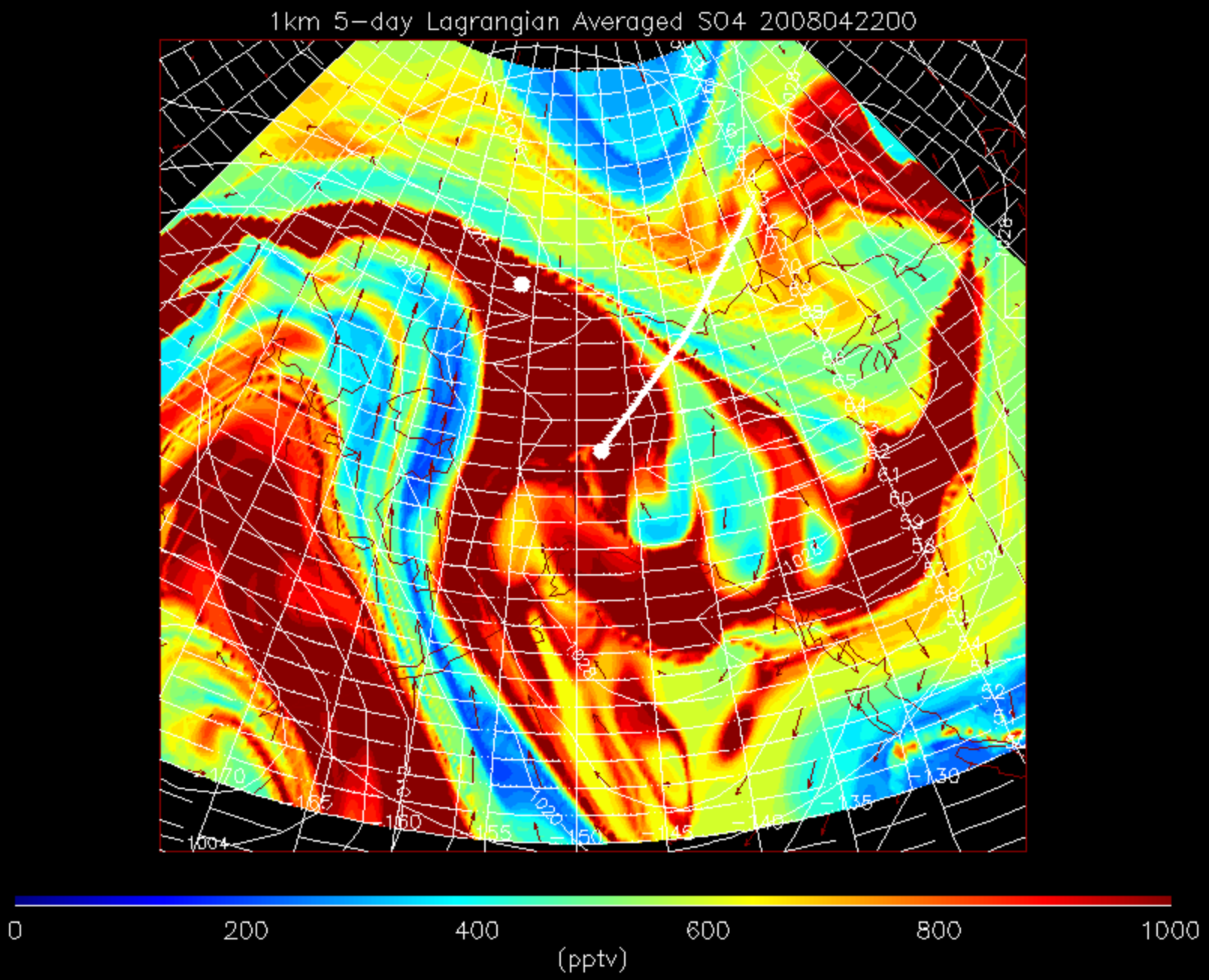
36hr FX

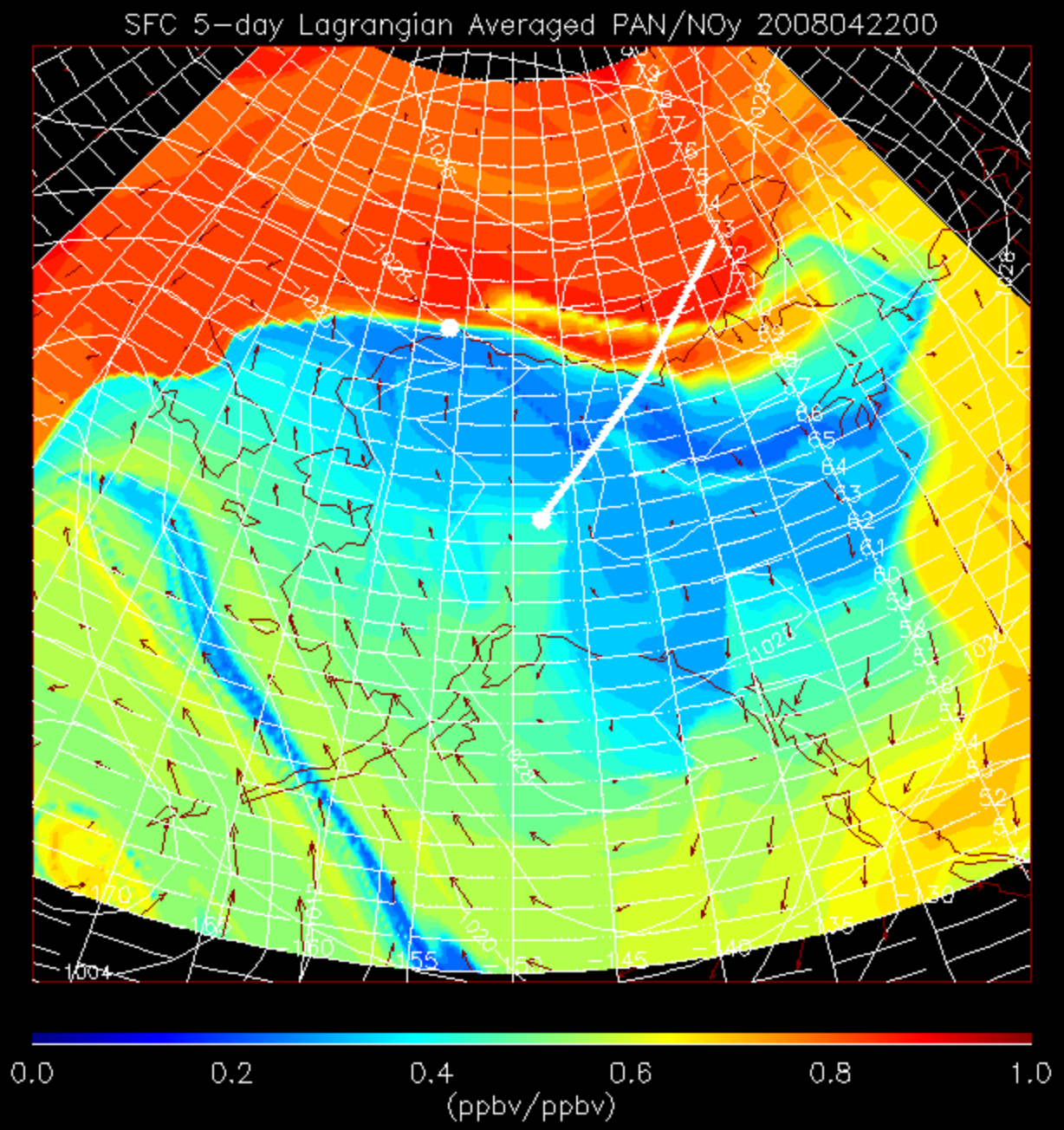

5km 5-day Lagrangian Averaged BC+OC 2008042200
0
2
4
6
8
10
(ppbv)

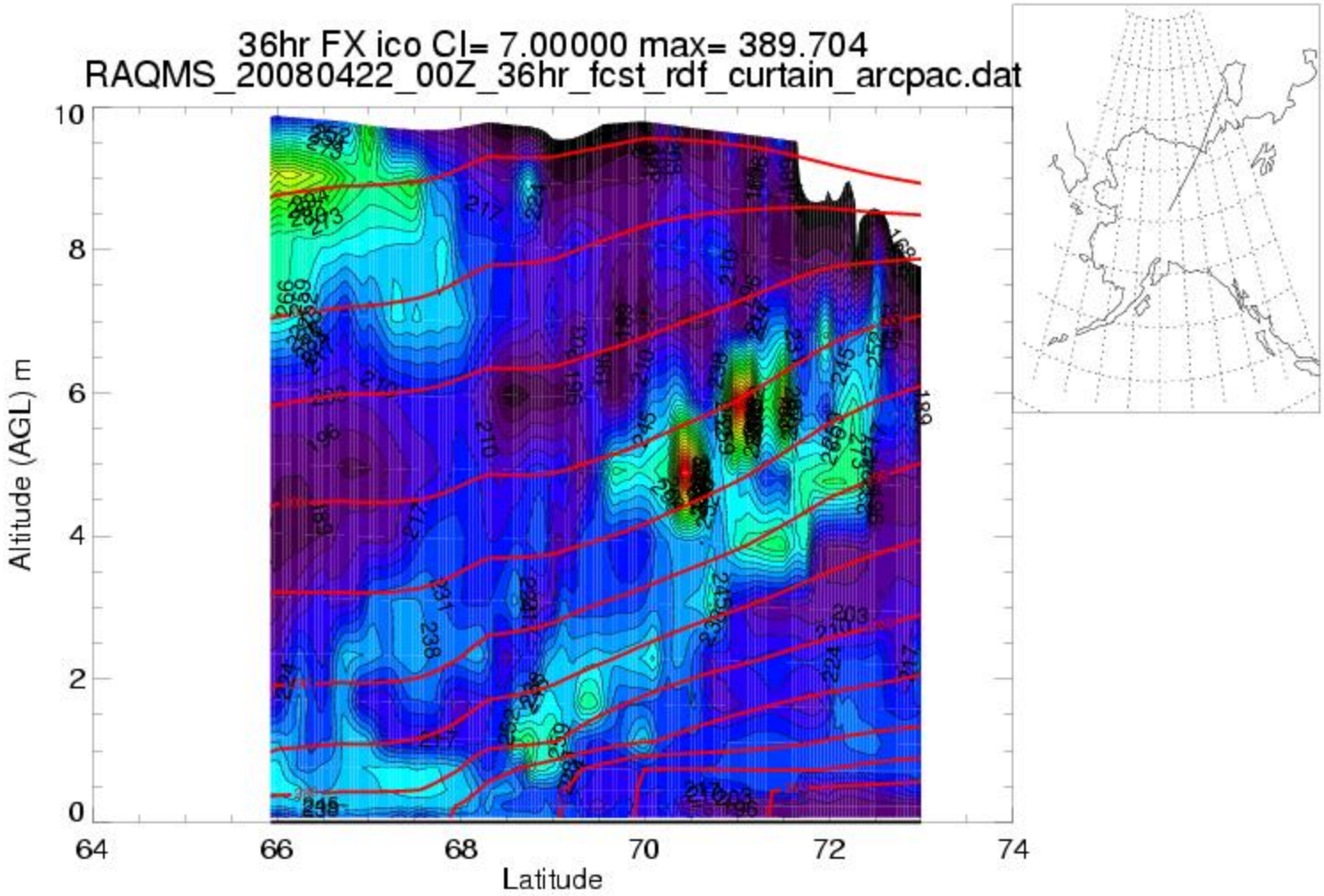
60hr FX

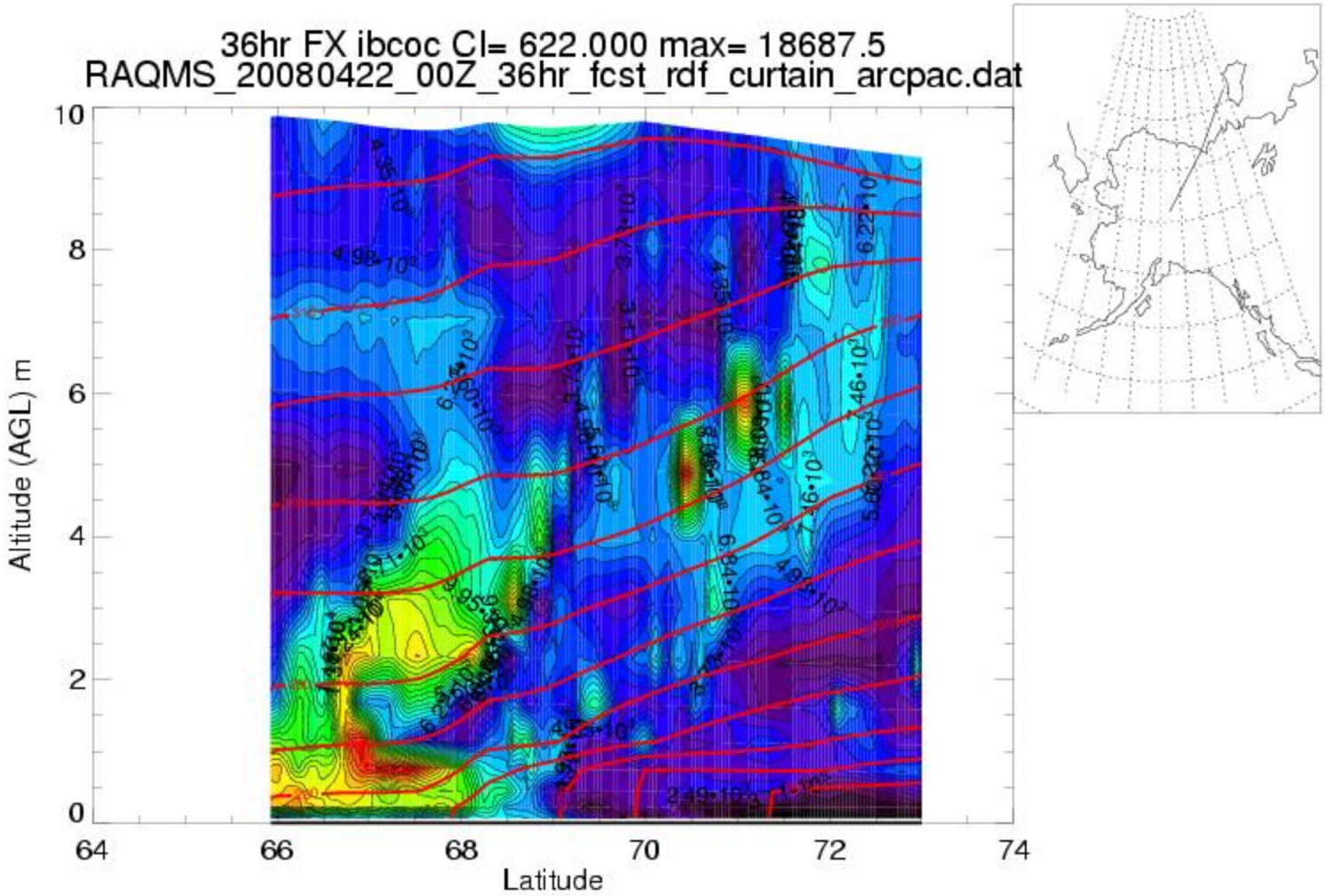

1km 5-day Lagrangian Averaged SO4 2008042200
0
200
400
600
800
1000
(pptv)

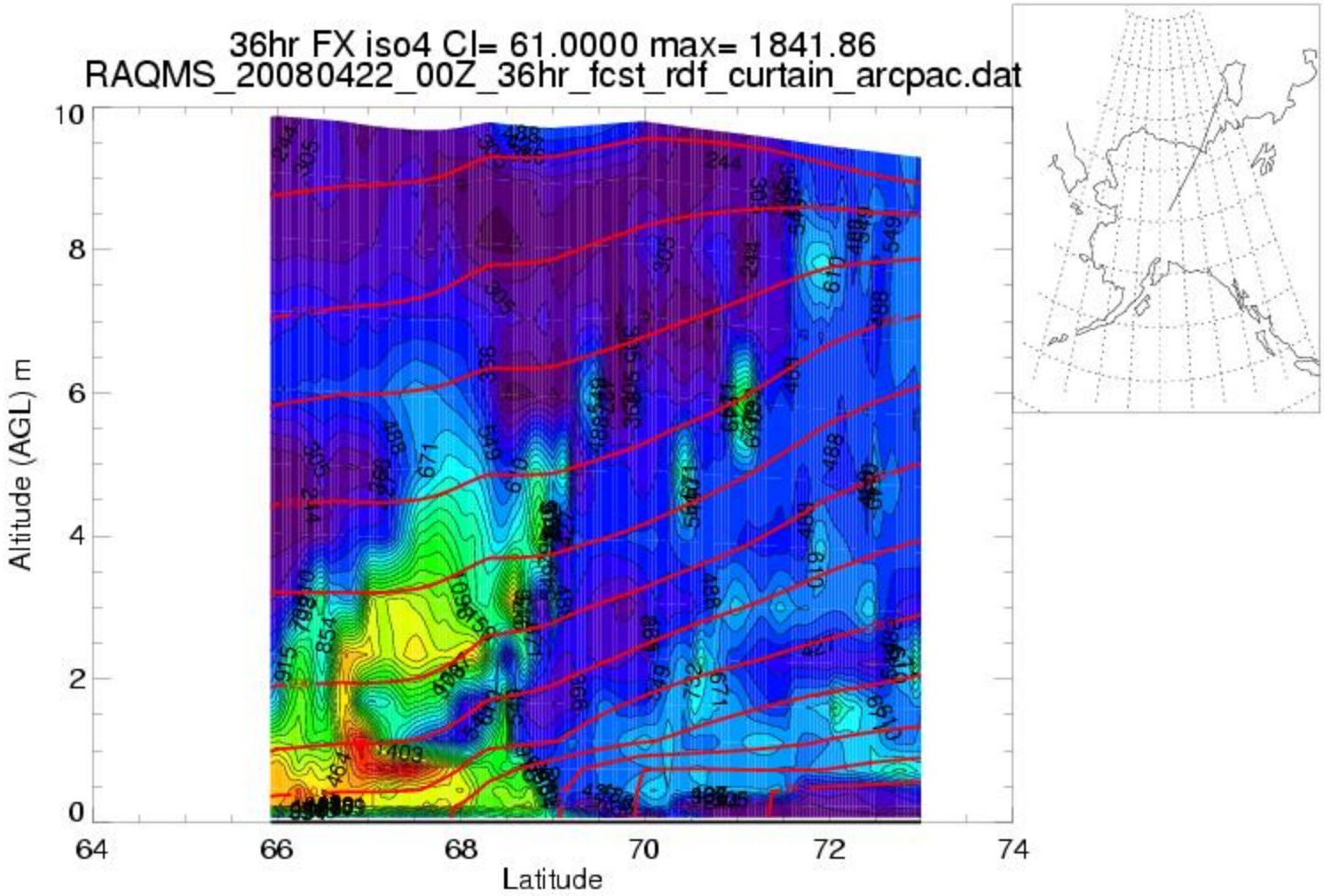
36hr FX


1km 5-day Lagrangian Averaged SO4 2008042200
0
200
400
600
800
1000
(pptv)


SFC 5-day Lagrangian Averaged PAN/NOy 2008042200
0.0
0.2
0.4
0.6
0.8
1.0
(ppbv/ppbv)


36hr FX ico CI= 7.00000 max= 389.704
RAQMS_20080422_00Z_36hr_fcst_rdf_curtain_arcpac.dat
Altitude (AGL) m
Latitude
0
2
4
6
8
10
64
66
68
70
72
74


36hr FX ibcoc CI= 622.000 max= 18687.5
RAQMS_20080422_00Z_36hr_fcst_rdf_curtain_arcpac.dat
Altitude (AGL) m
Latitude
0
2
4
6
8
10
64
66
68
70
72
74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Altitude (AGL) m
Latitude
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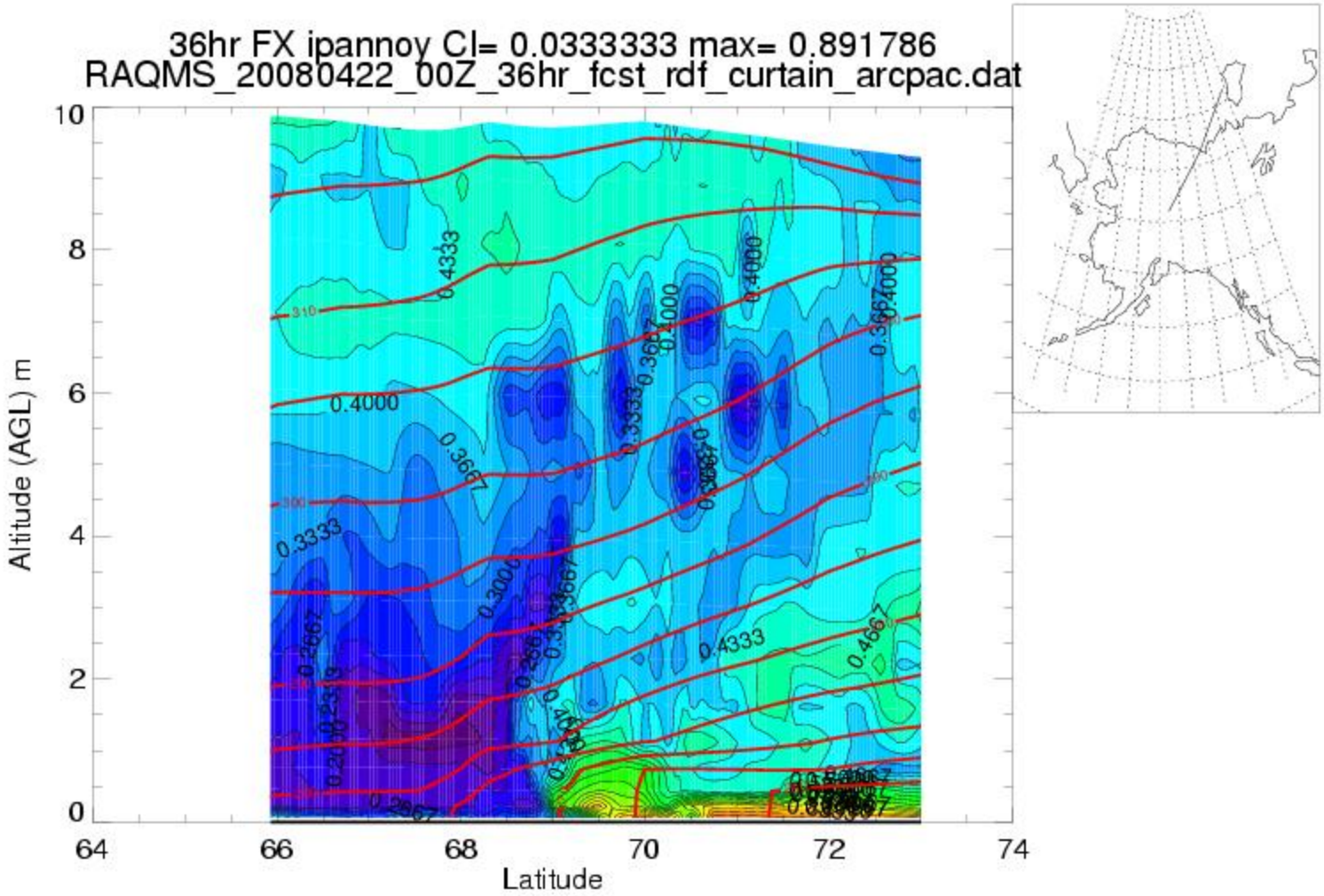
2
4
6
8
10
64
66
68
70
72
74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RAQMS_20080422_00Z_36hr_fcst_rdf_curtain_arcpac.dat
Altitude (AGL) m
Latitude
0
2
4
6
8
10
64
66
68
70
72
74
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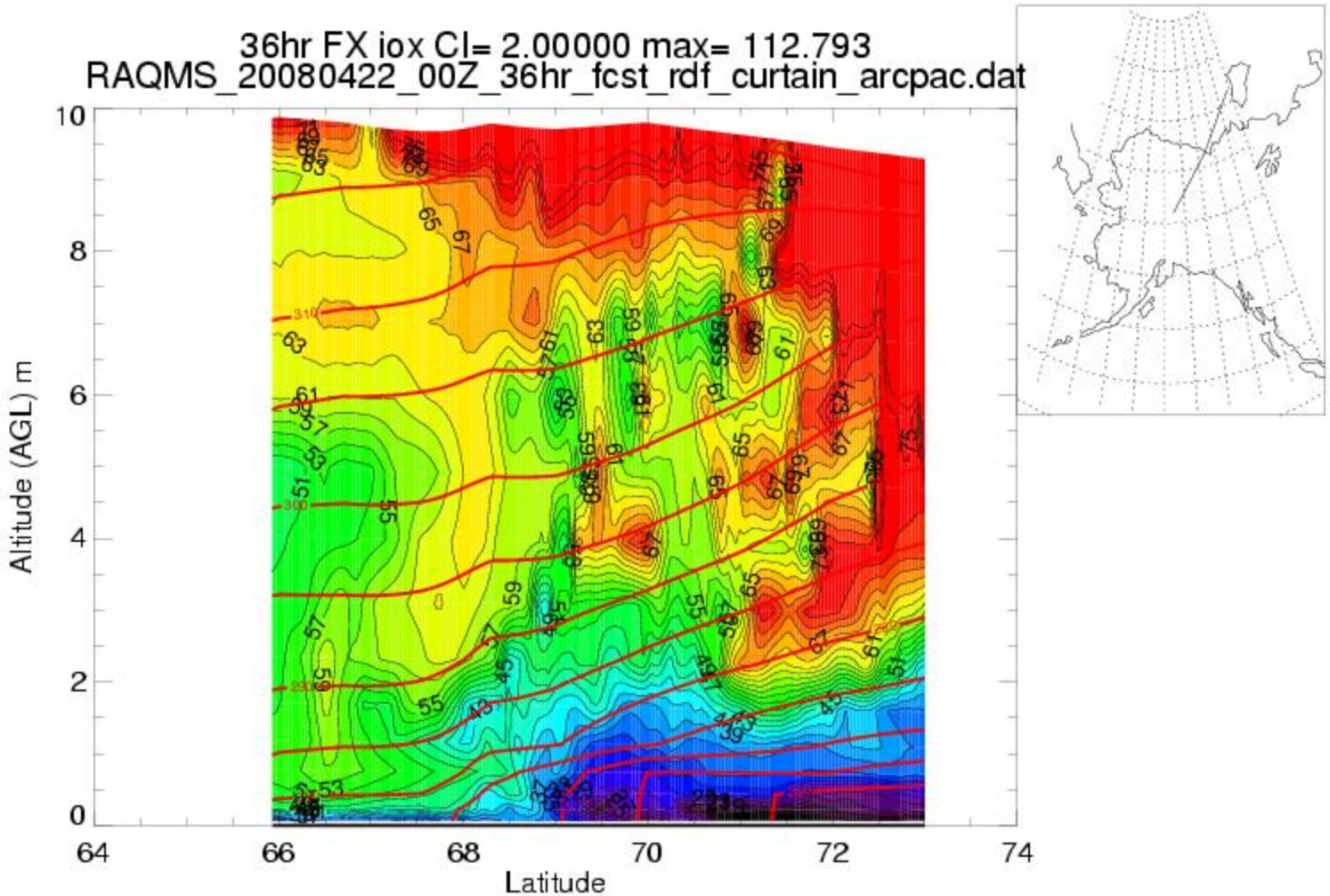
0.4000
0.3667
0.3333
0.3000
0.4667


36hr FX iox CI= 2.00000 max= 112.793
RAQMS_20080422_00Z_36hr_fcst_rdf_curtain_arcpac.dat
Altitude (AGL) m
Latitude
0
2
4
6
8
10
64
66
68
70
72
74