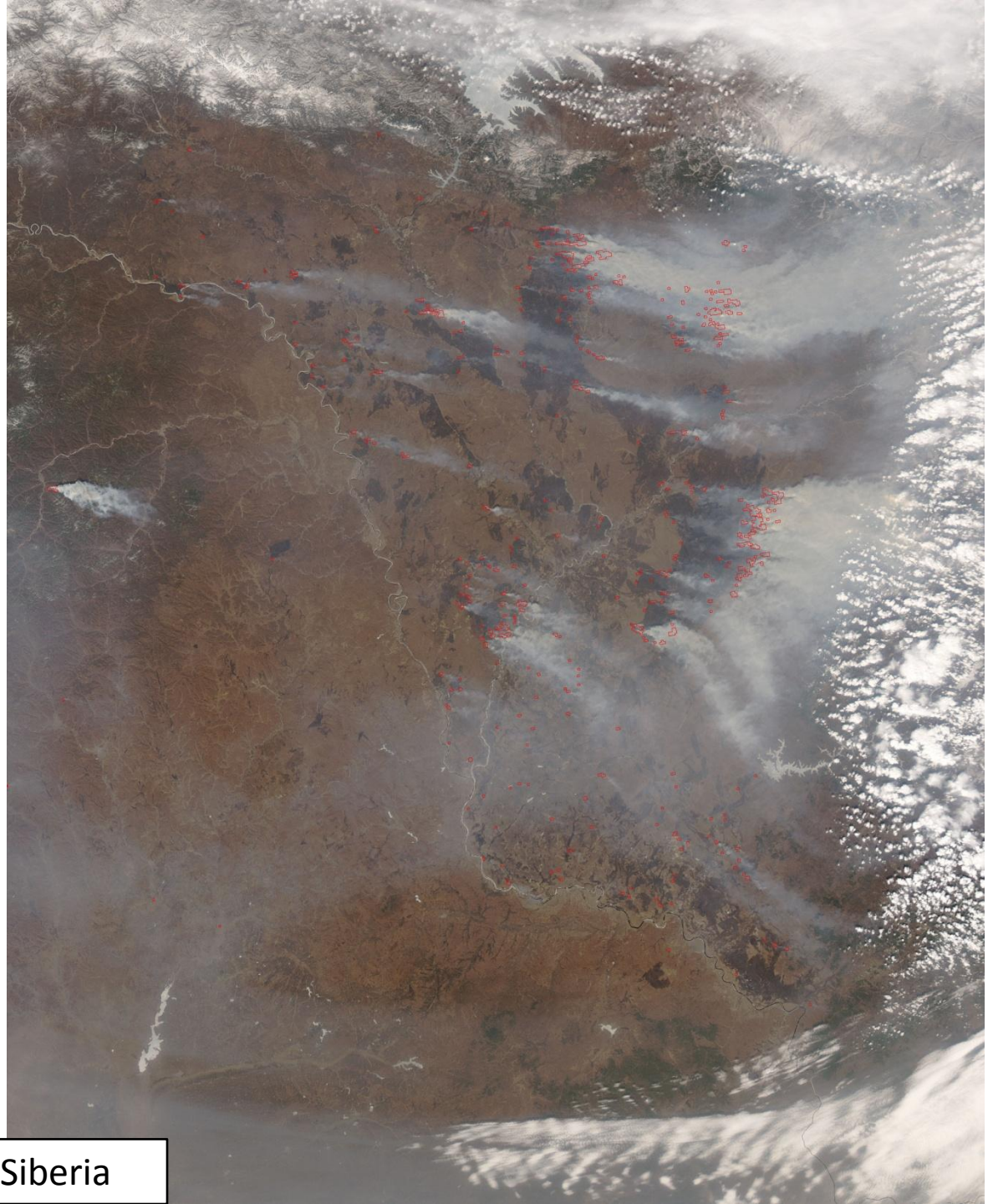
Thursday April 17-Monday April 21
Biomass Burning Event:

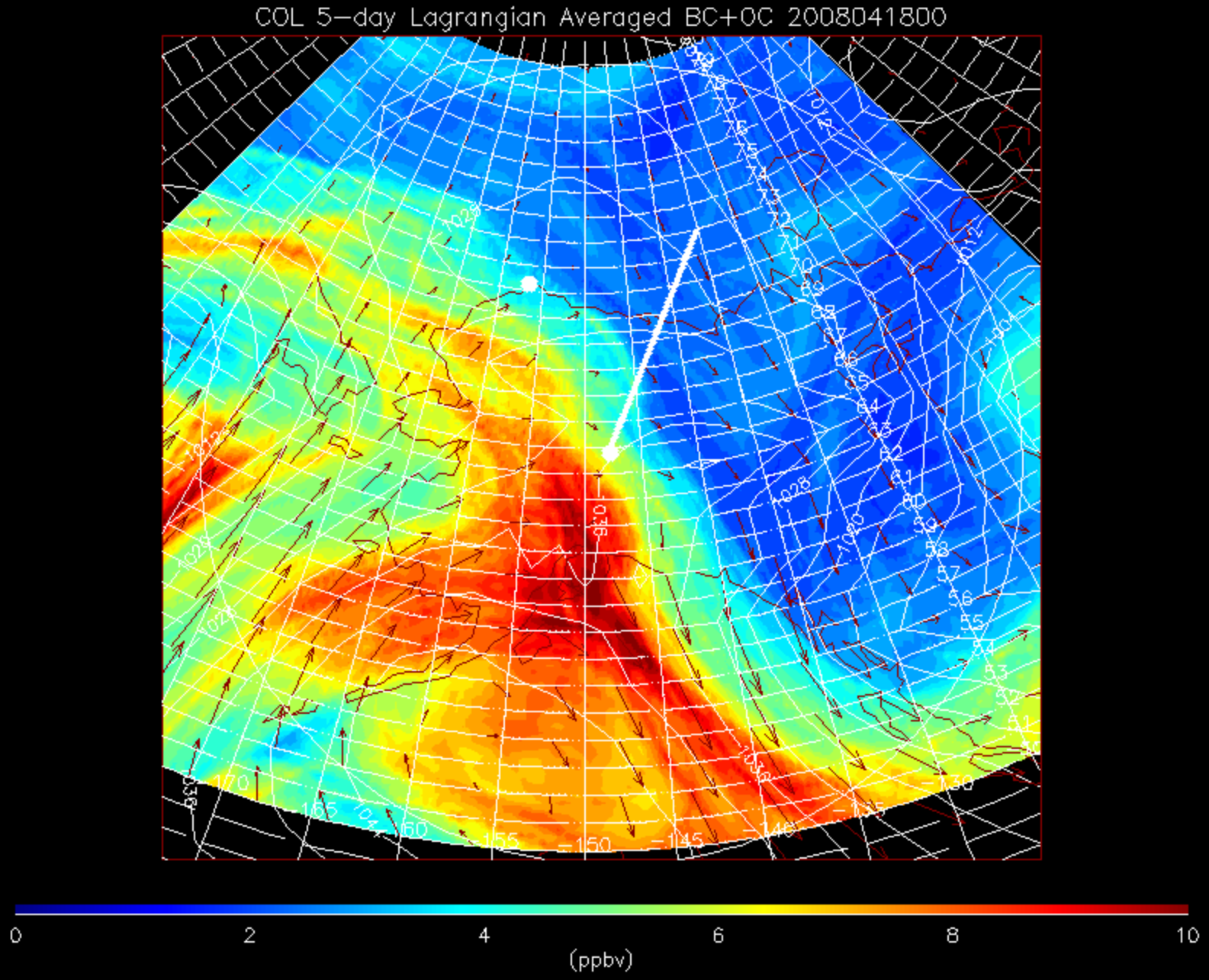
Deadhorse
to
Barrow
and onto
Banks Island



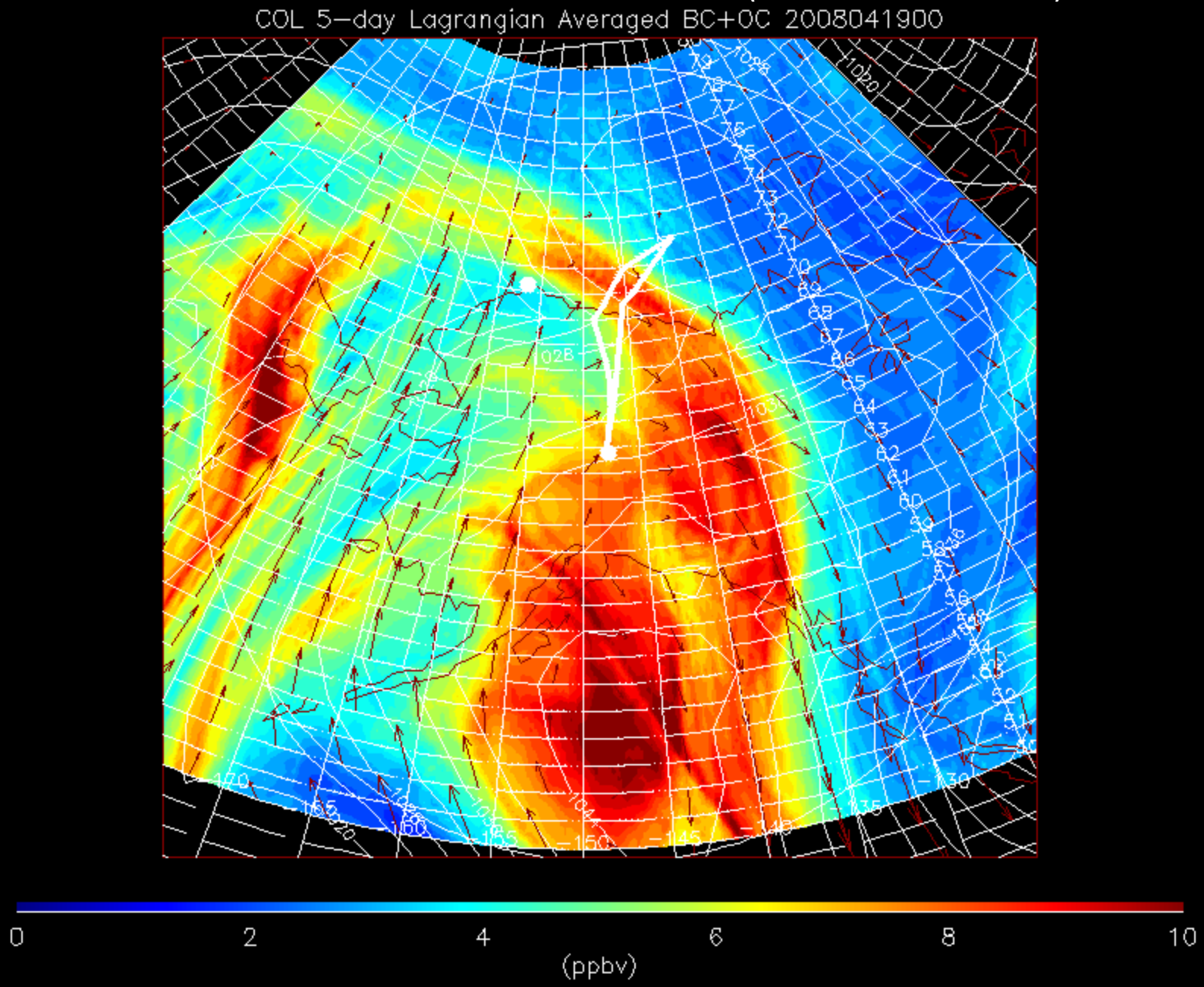
Fires in Southern Siberia

Total column of BB-CO and 500 hPa geopotential
Analysis @ 20080420.120000
Actual @ 20080420.150000
mg/m2
0
20
40
60
80
100
120
140
160
180
200
Fires in Southern Siberia
ARCPAC field of operations
Rosey sunset:
Mount Horeb, WI

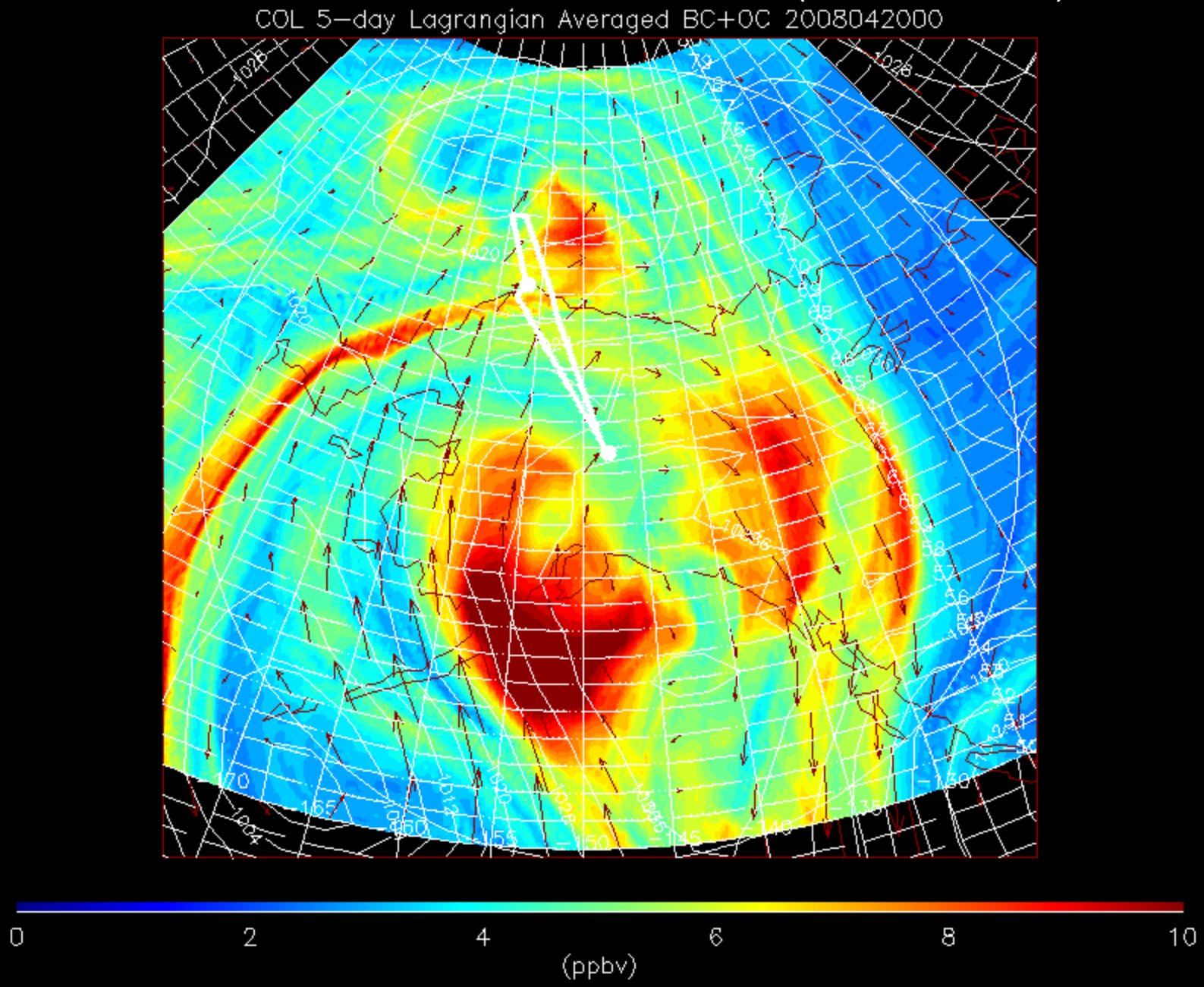
THURSDAY 4:00PM LOCAL



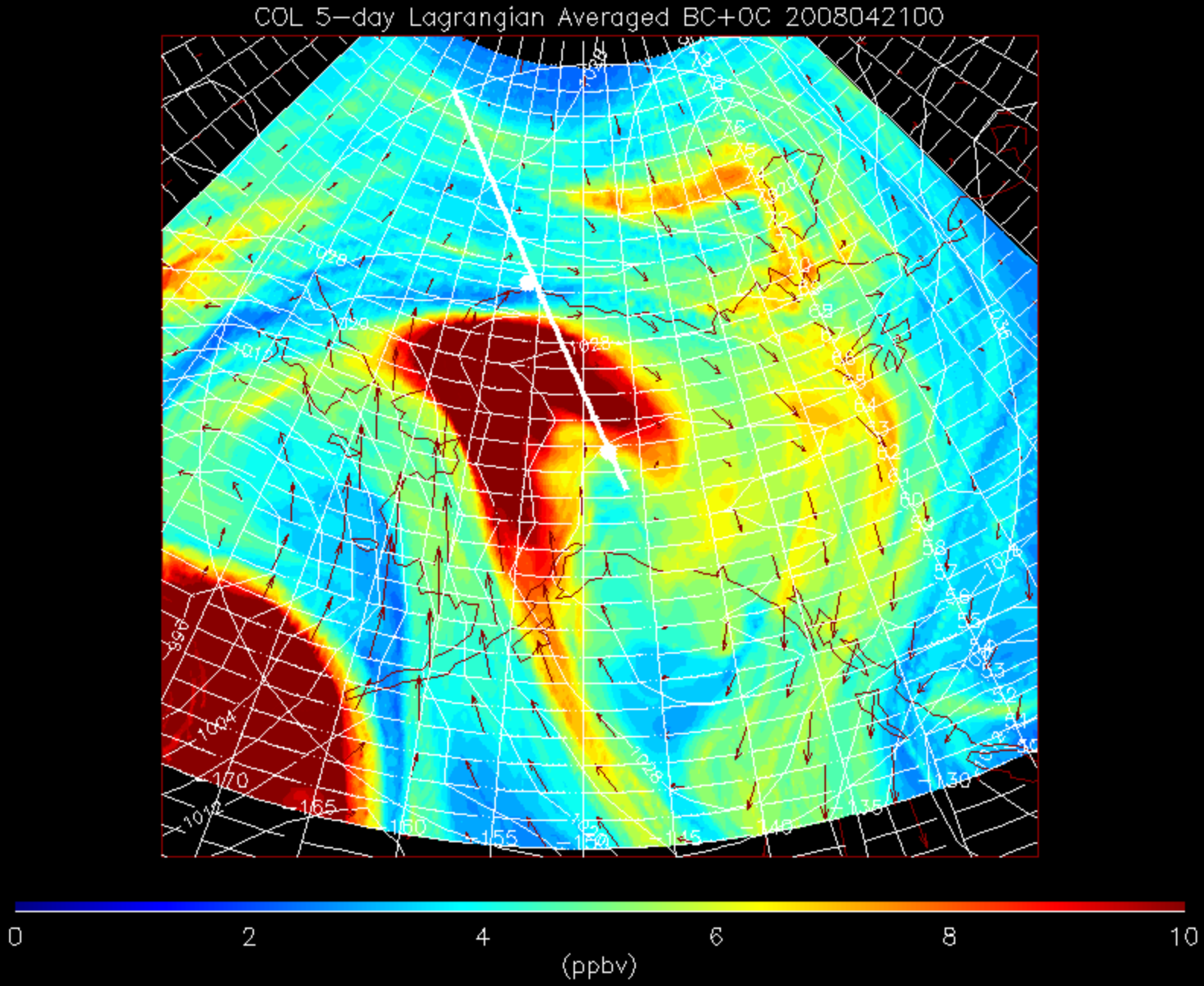
FRIDAY 4:00PM LOCAL (DEADHORSE FLIGHT)



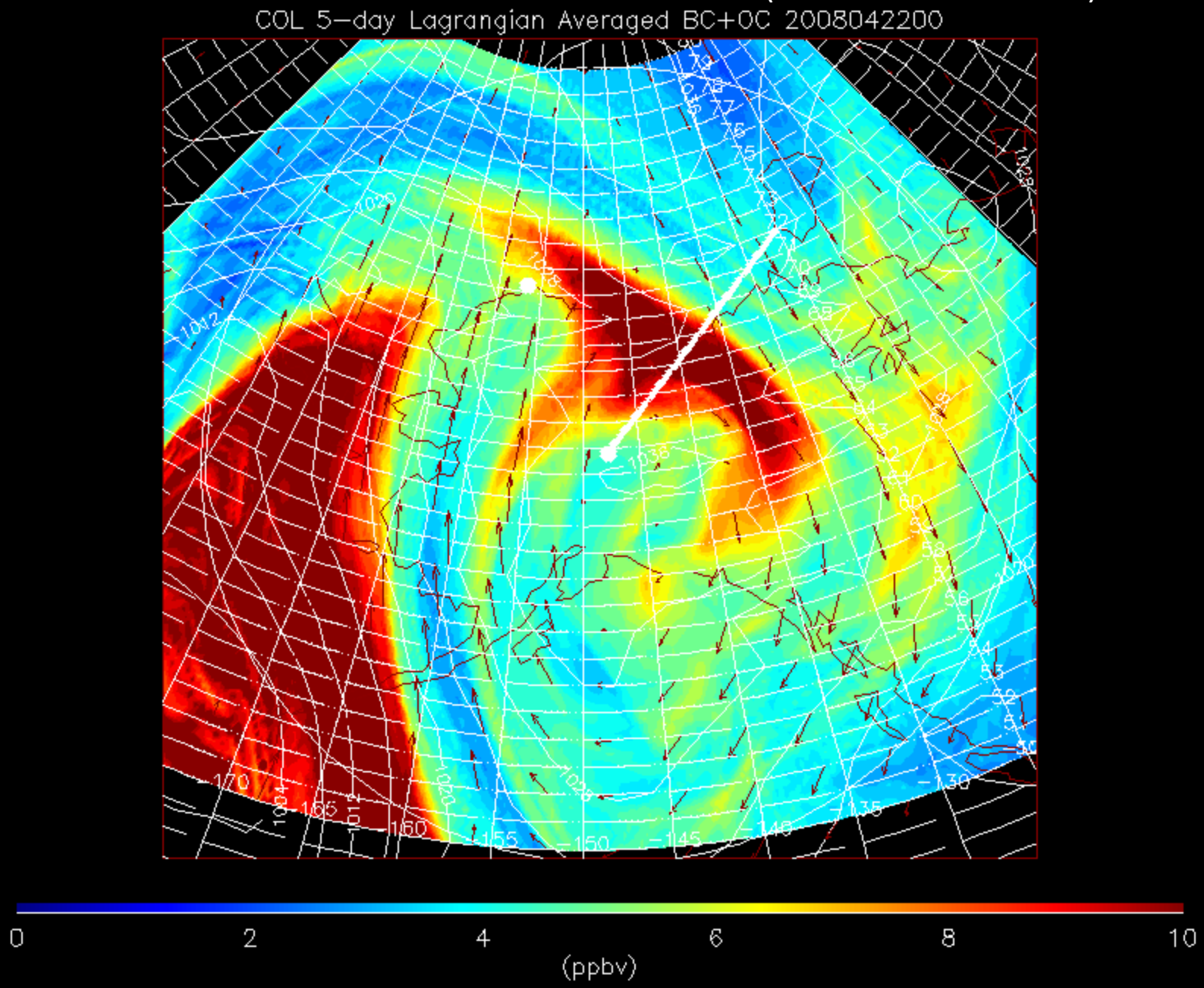
SATURDAY 4:00PM LOCAL (BARROW FLIGHT)



SUNDAY 4:00PM LOCAL (TODAY)

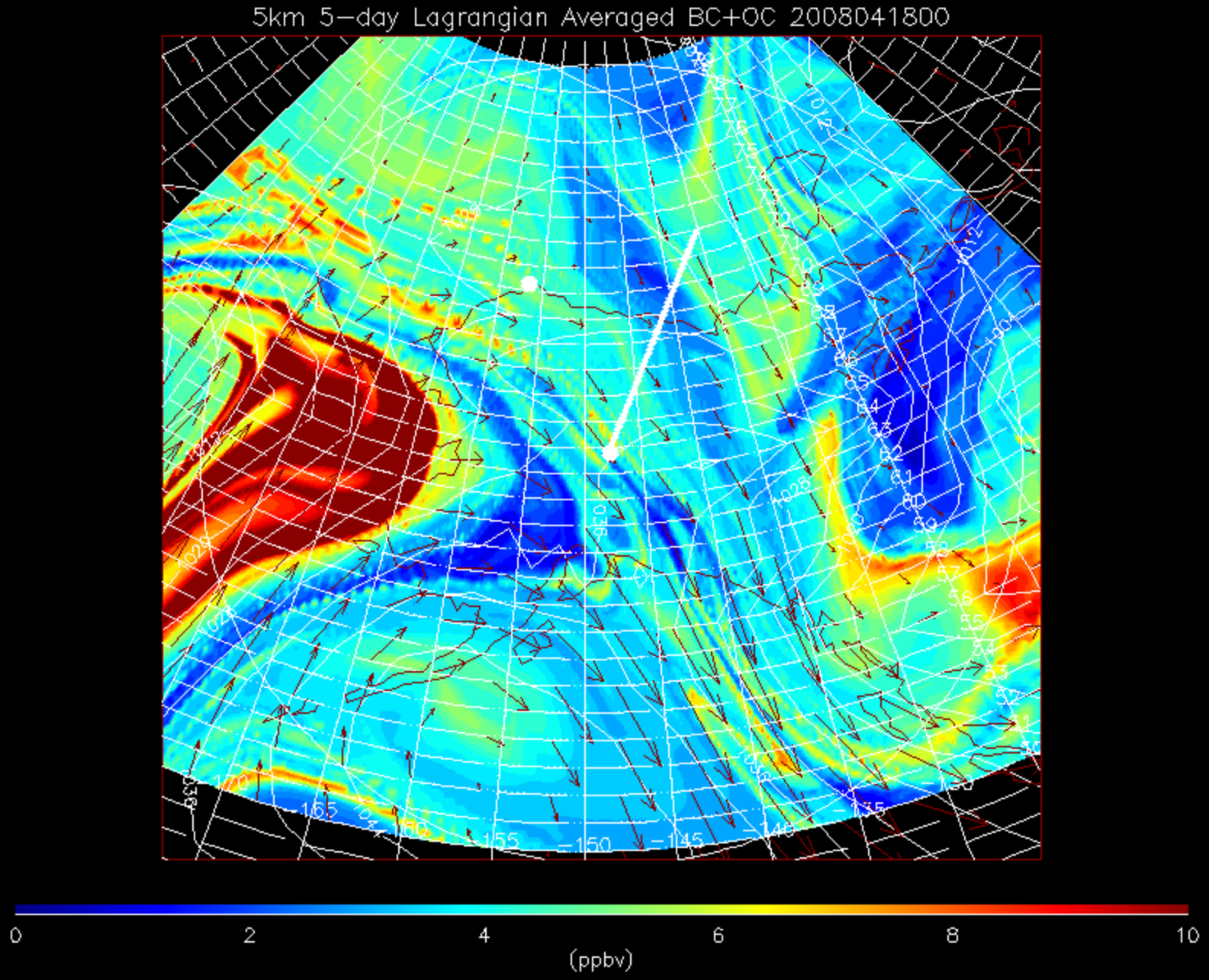


SUNDAY 4:00PM LOCAL (ONTO BANKS ISLAND)

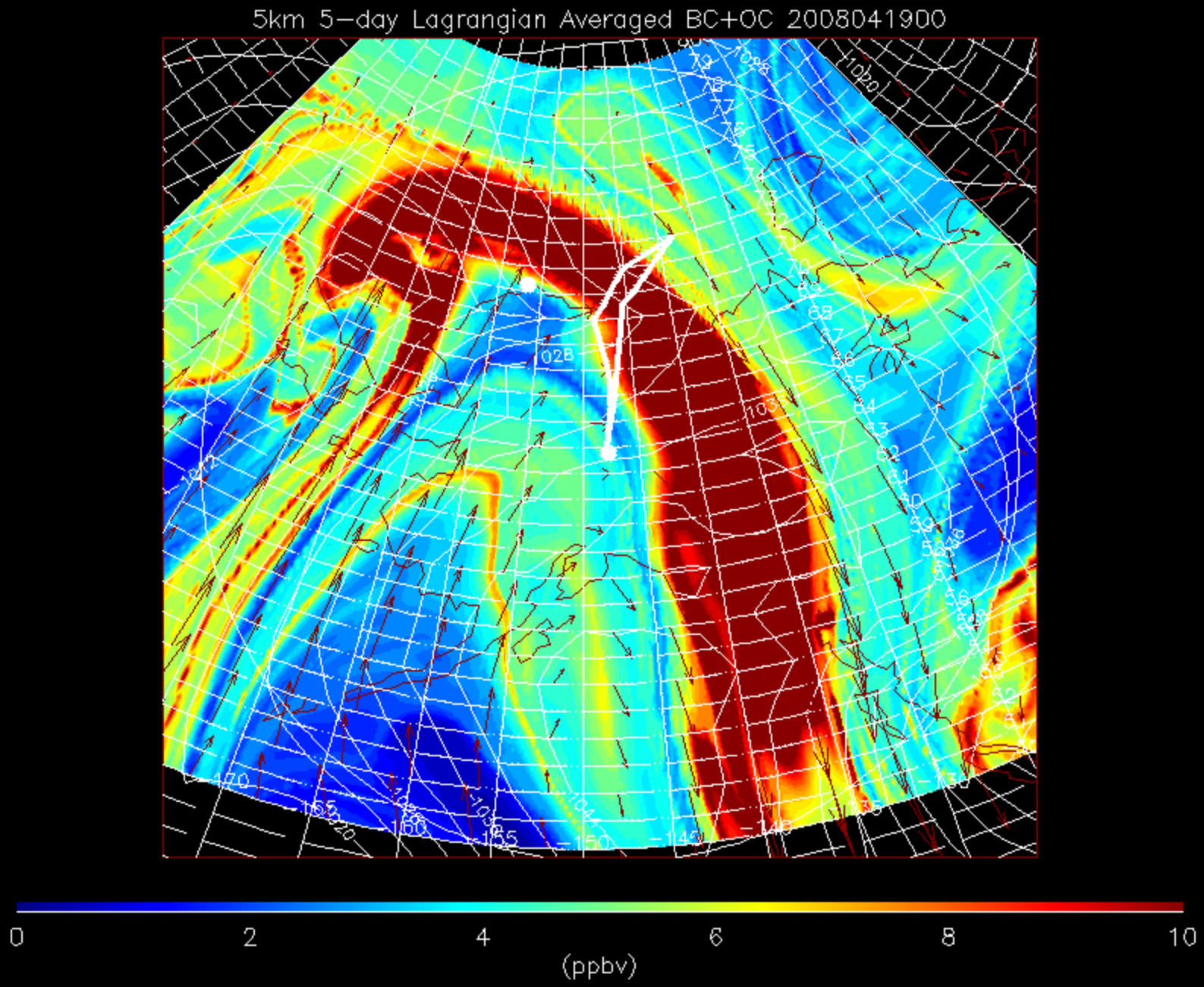


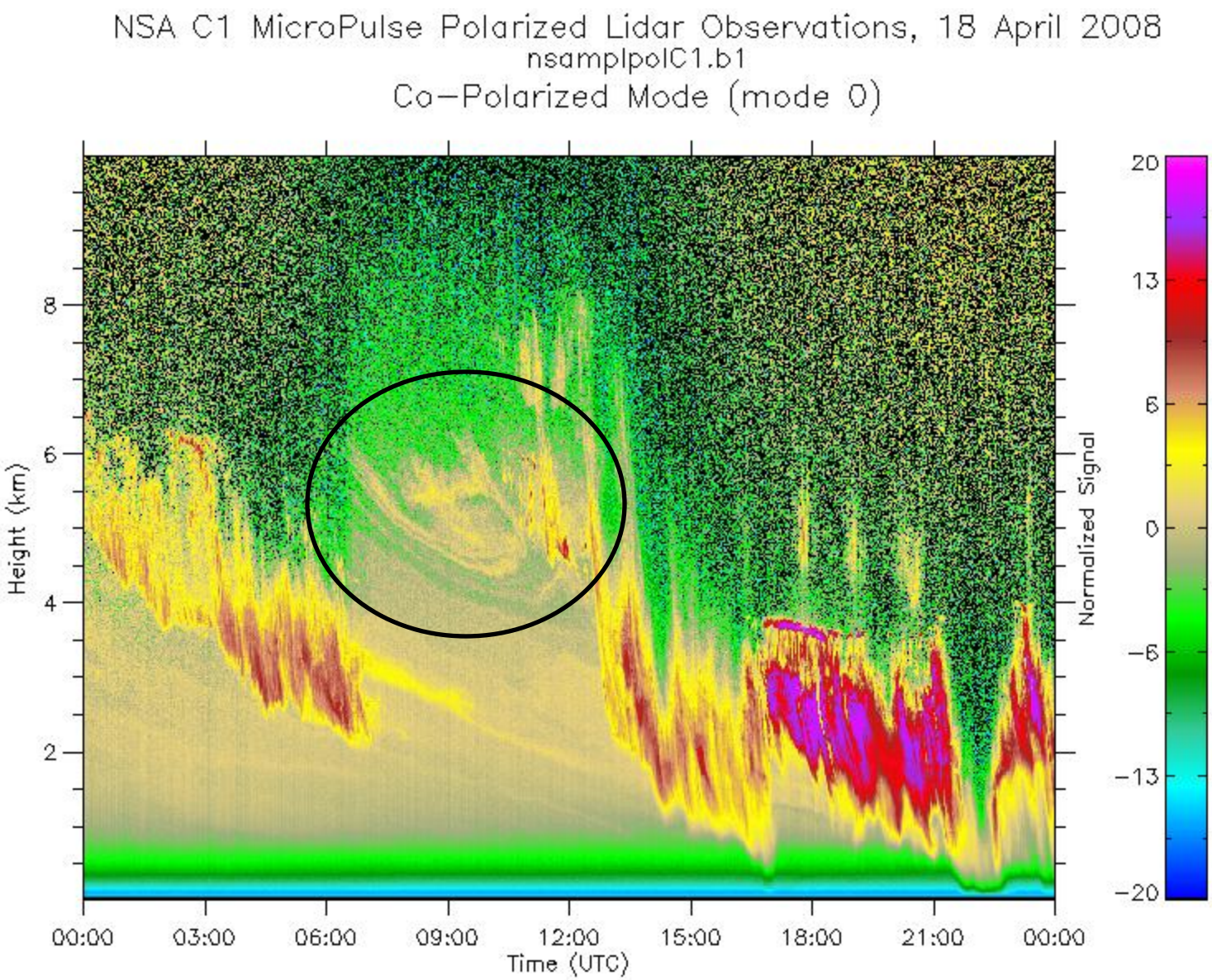
Friday April 18th Deadhorse Flight

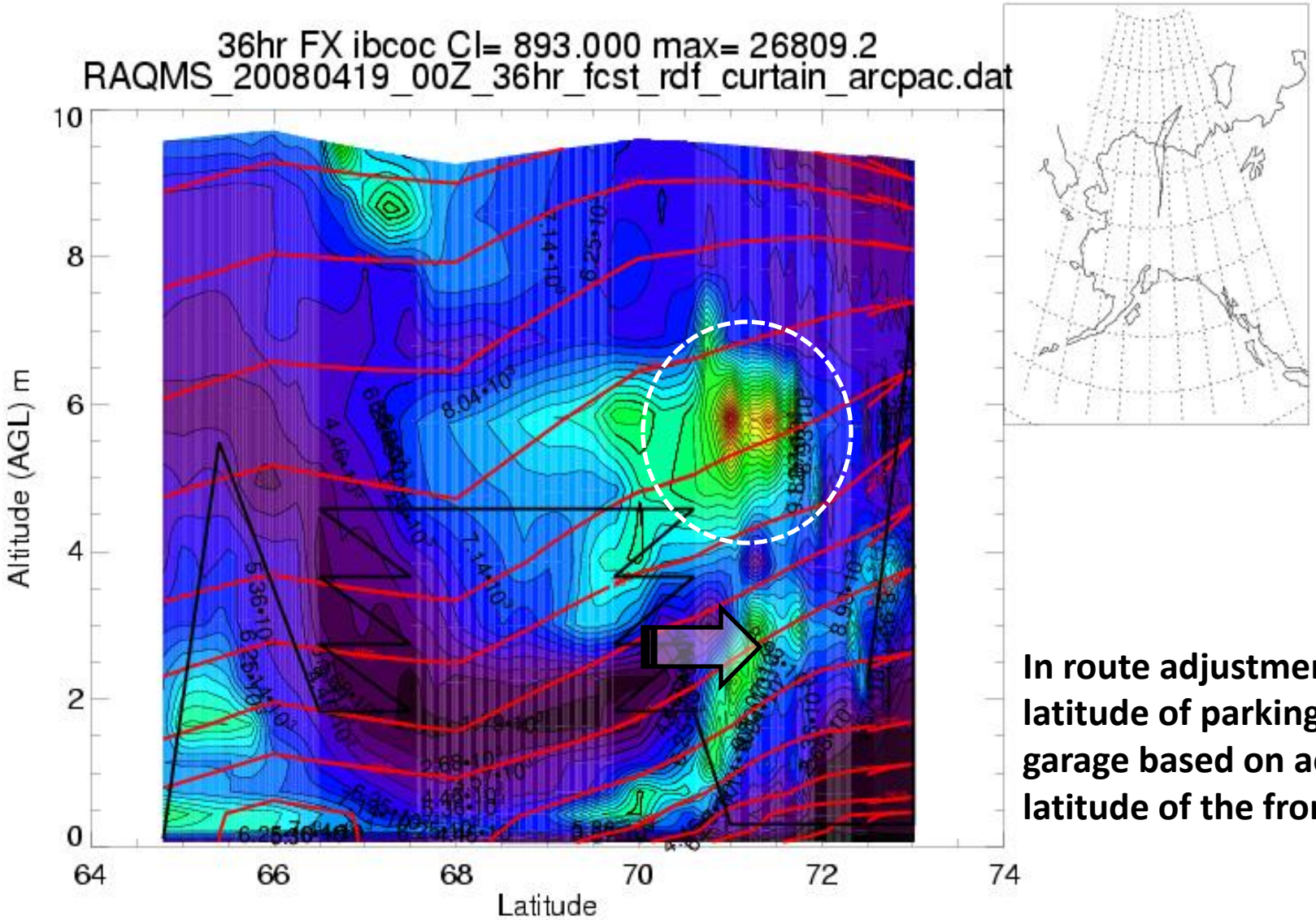
THURSDAY 4:00PM LOCAL



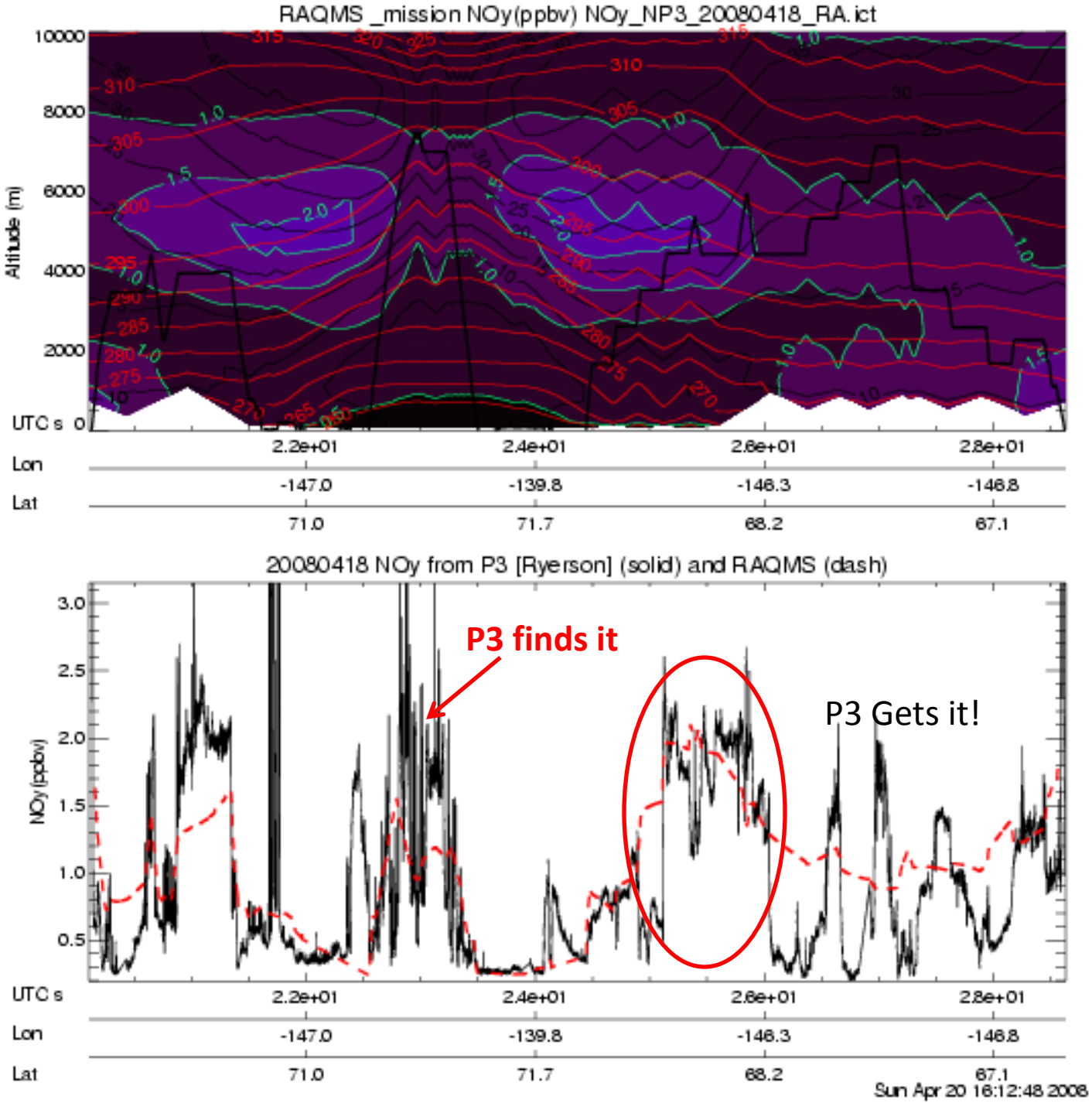
FRIDAY 4:00PM LOCAL



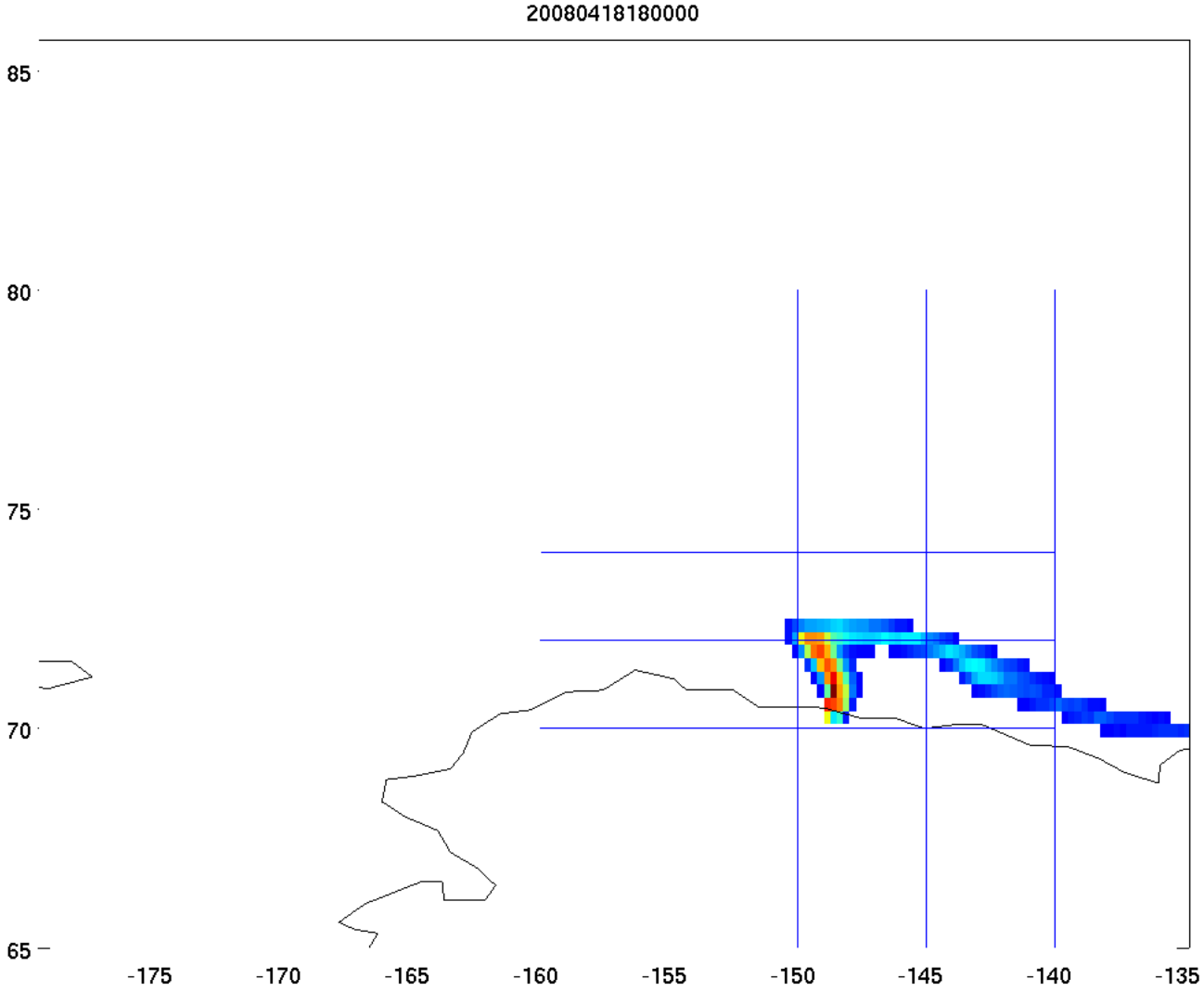

NSA C1 MicroPulse Polarized Lidar Observations, 18 April 2008
nsamplpolC1.b1
Co-Polarized Mode (mode 0)
Height (km)
8
6
4
2
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
00:00
Time (UTC)
Normalized Signal
20
13
6
0
-6
-13
-20



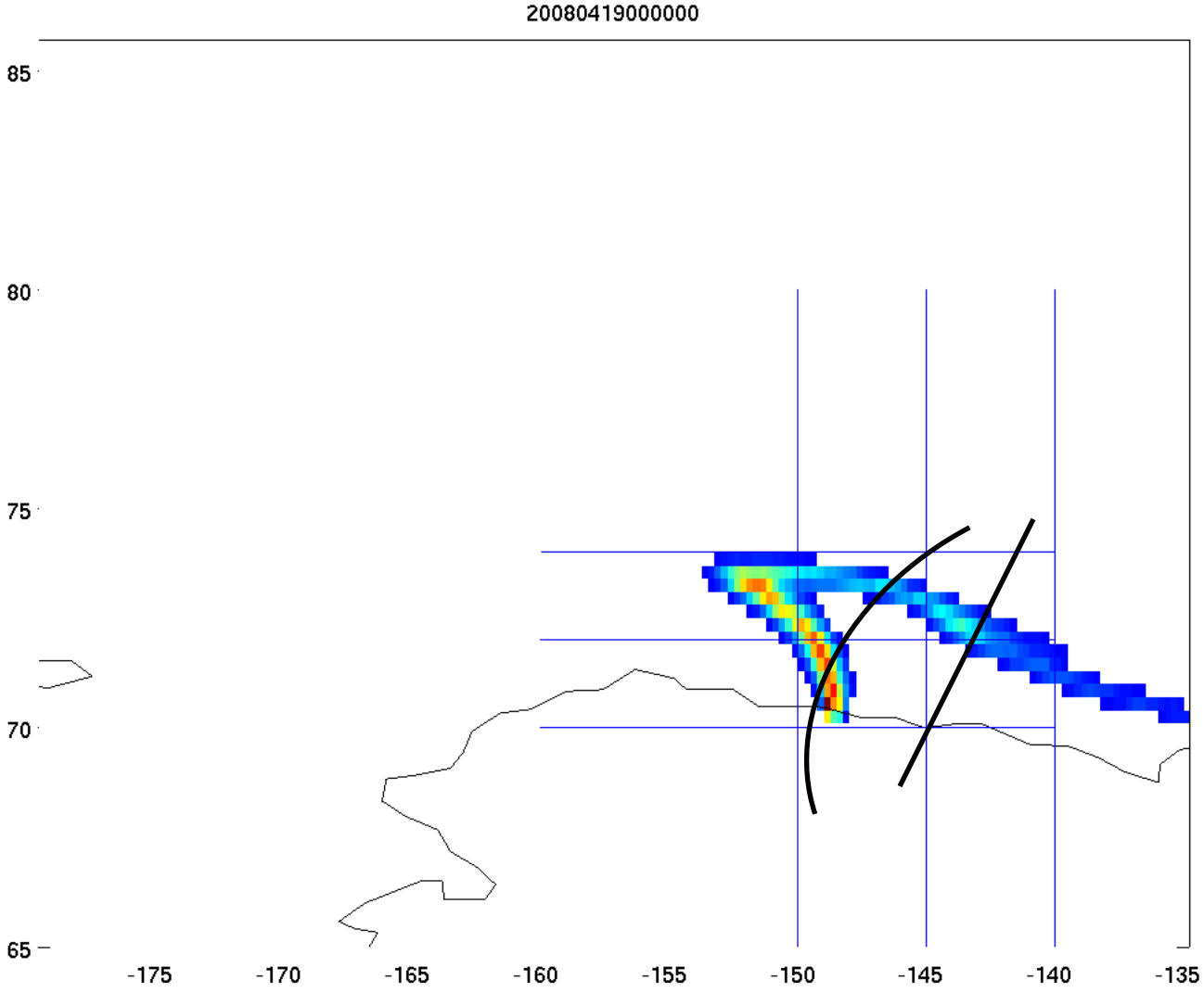
In route adjustment of latitude of parking garage based on actual latitude of the front

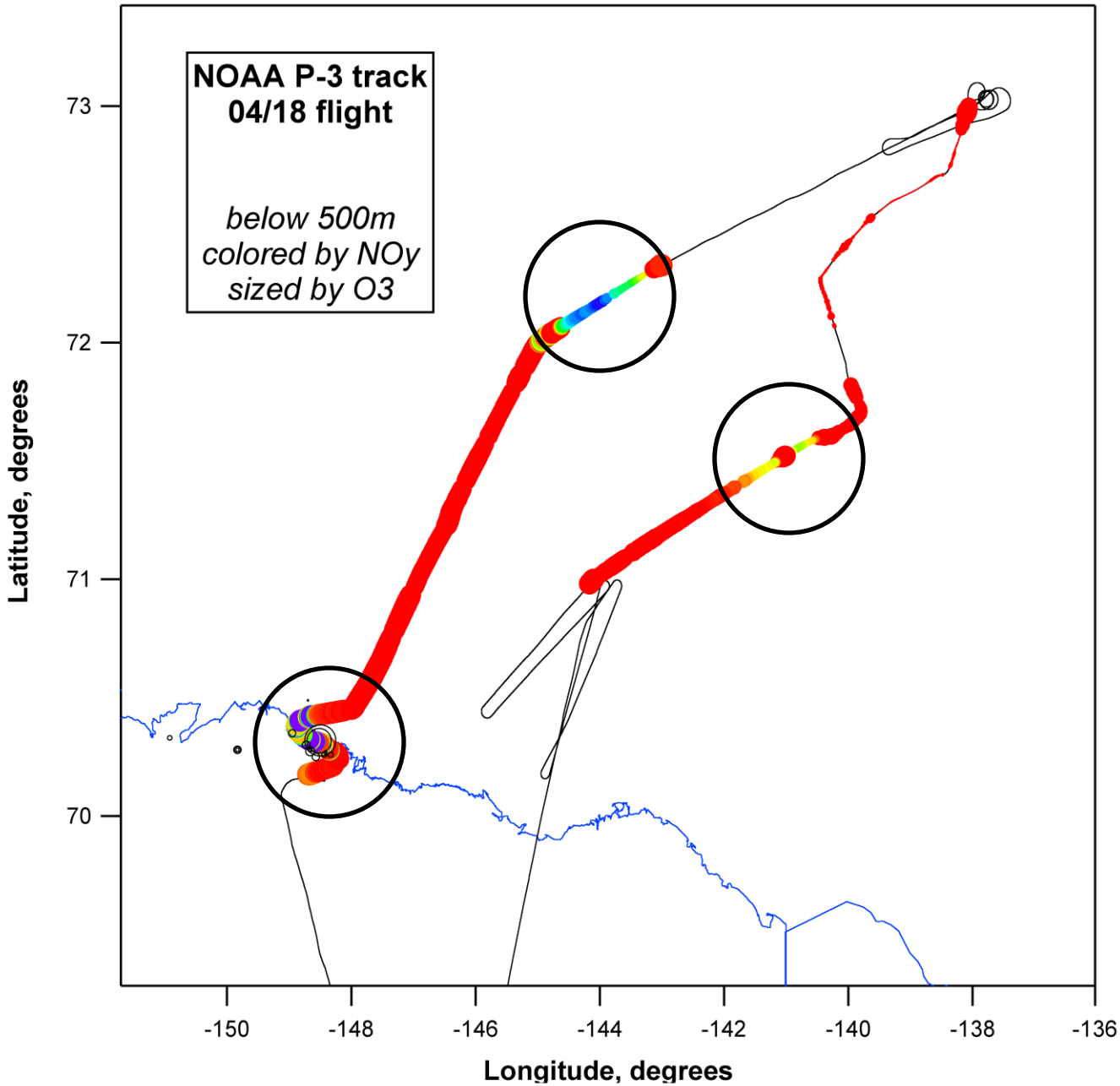

RAQMS _mission NOy(ppbv) NOy_NP3_20080418_RA.ict
Altitude (m)
UTC s
Lon
Lat
20080418 NOy from P3 [Ryerson] (solid) and RAQMS (dash)
NOy (ppbv)
P3 finds it
P3 Gets it!
Sun Apr 20 16:12:48 2008

Dead Horse plume

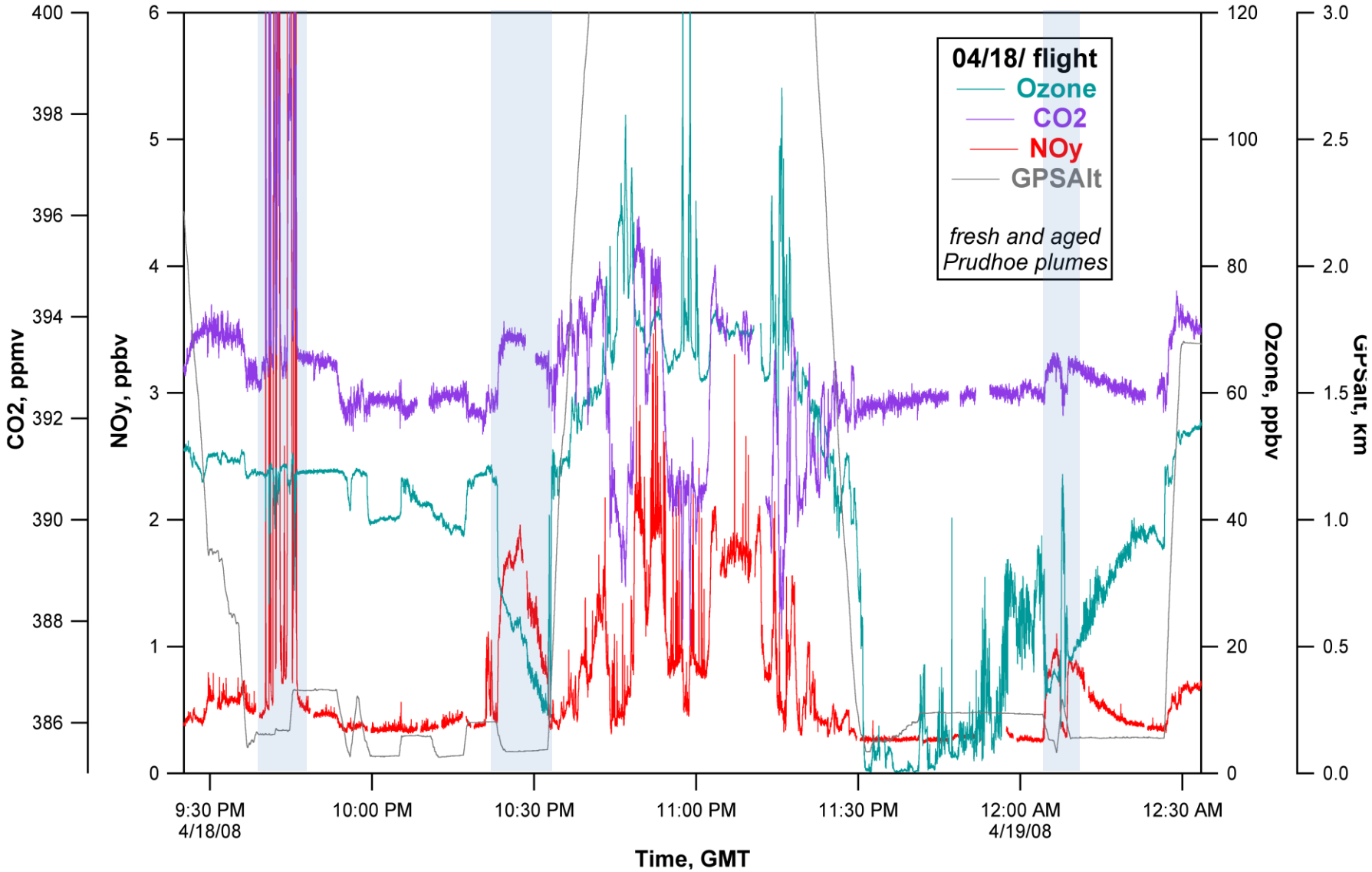


Dead Horse plume

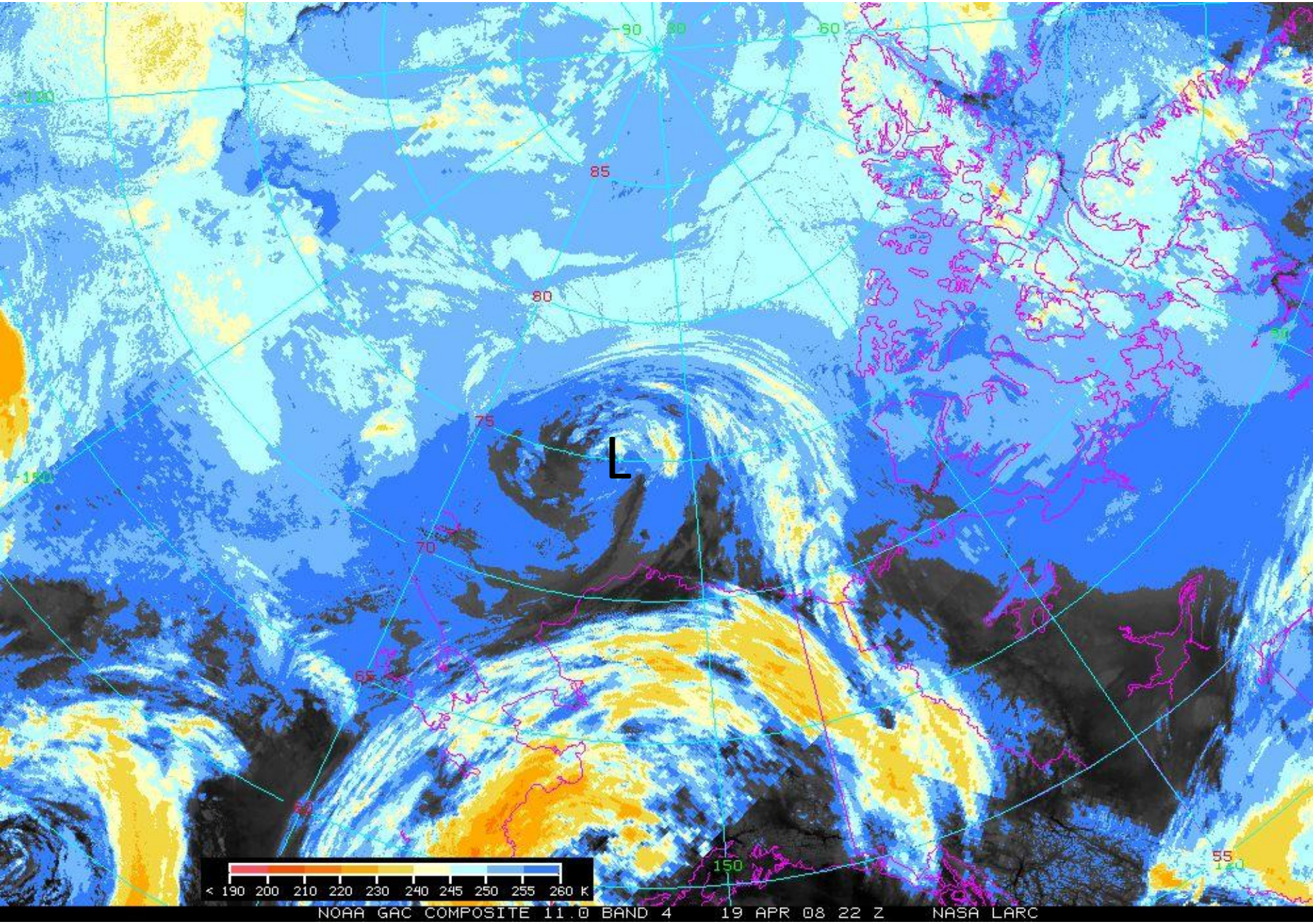



NOAA P-3 track
04/18 flight
below 500m
colored by NOy
sized by O3
73
72
71
70
Latitude, degrees
-150
-148
-146
-144
-142
-140
-138
-136
Longitude, degrees

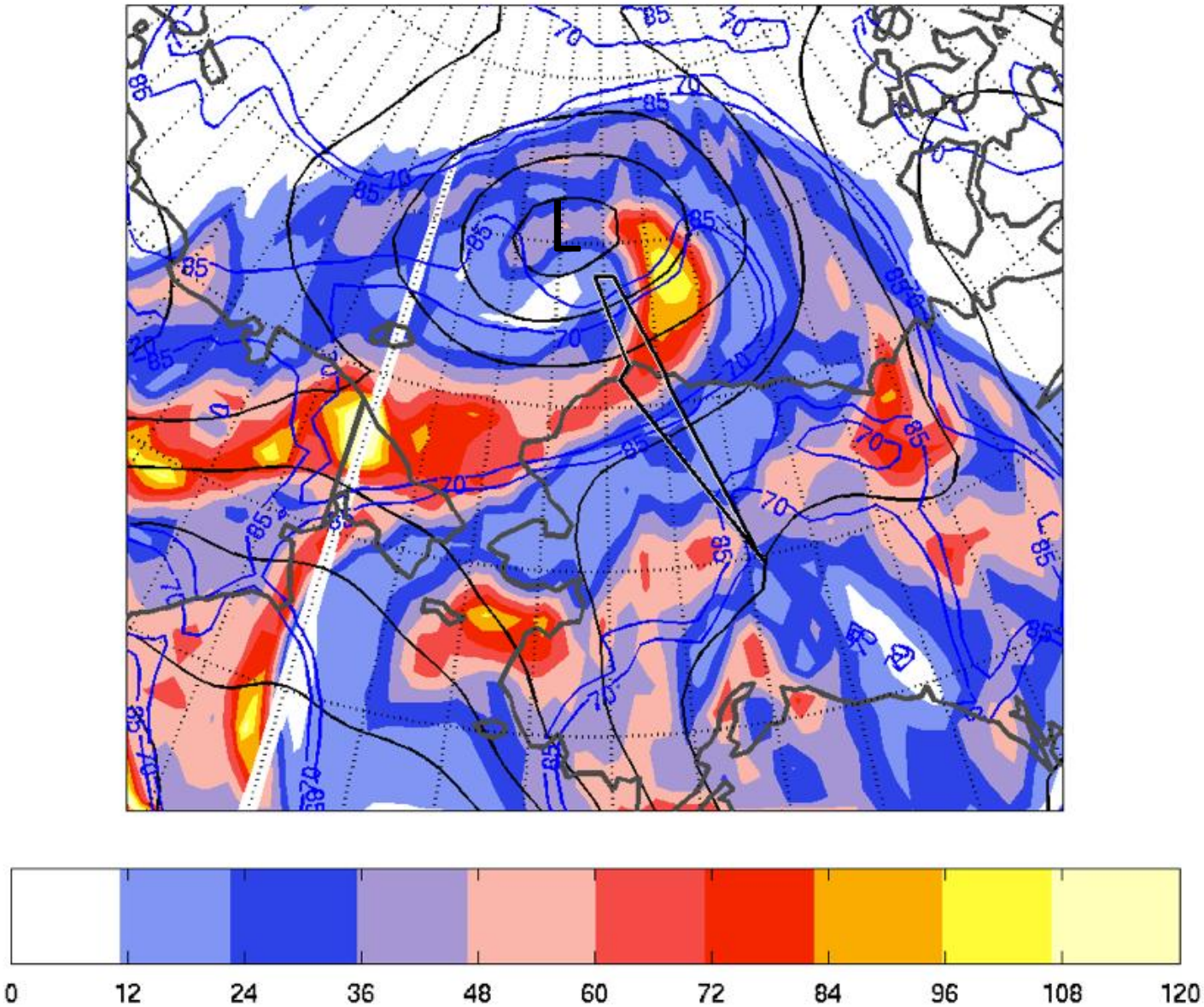
Dead Horse plume

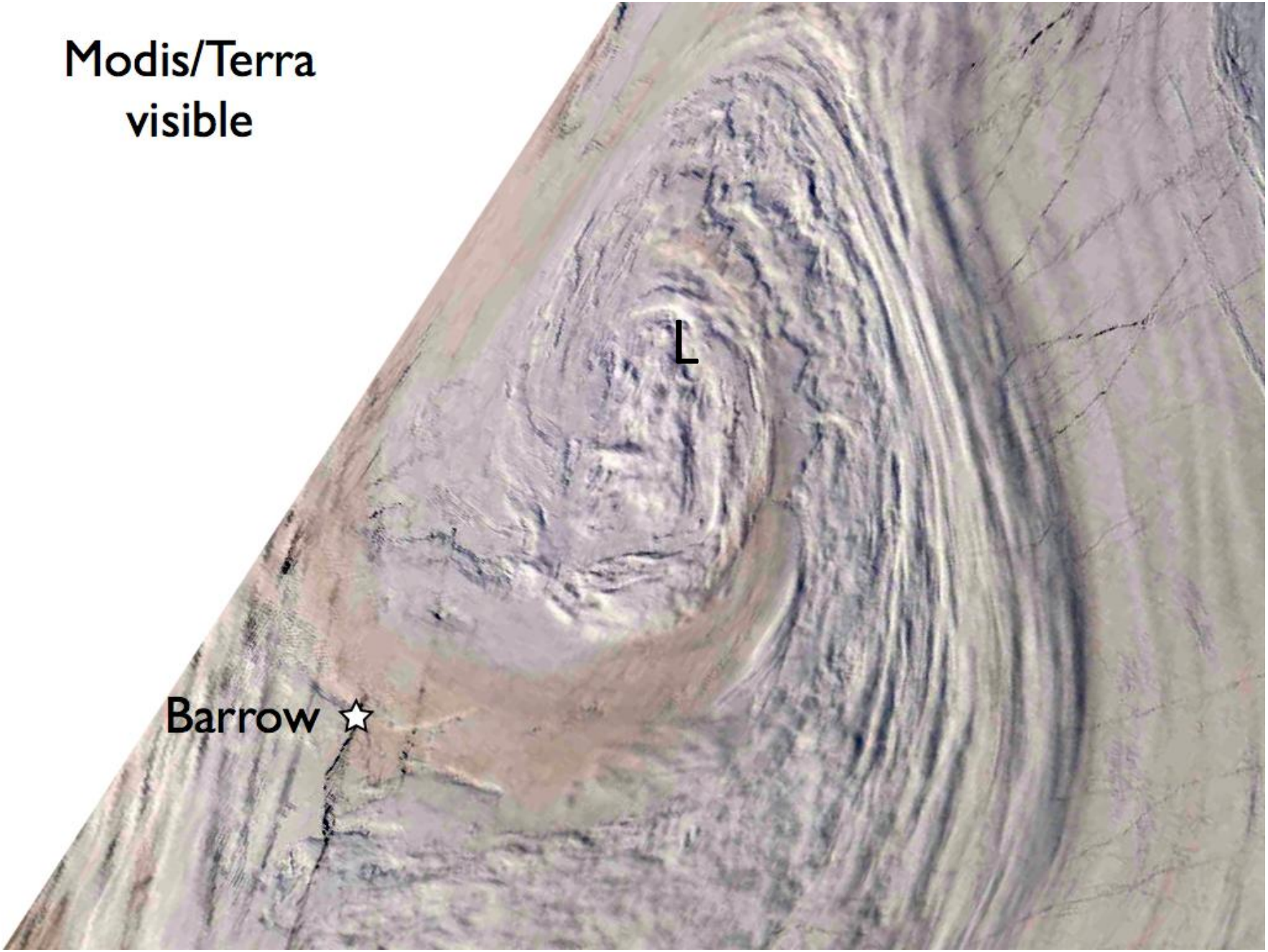


Saturday April 19th Barrow Flight

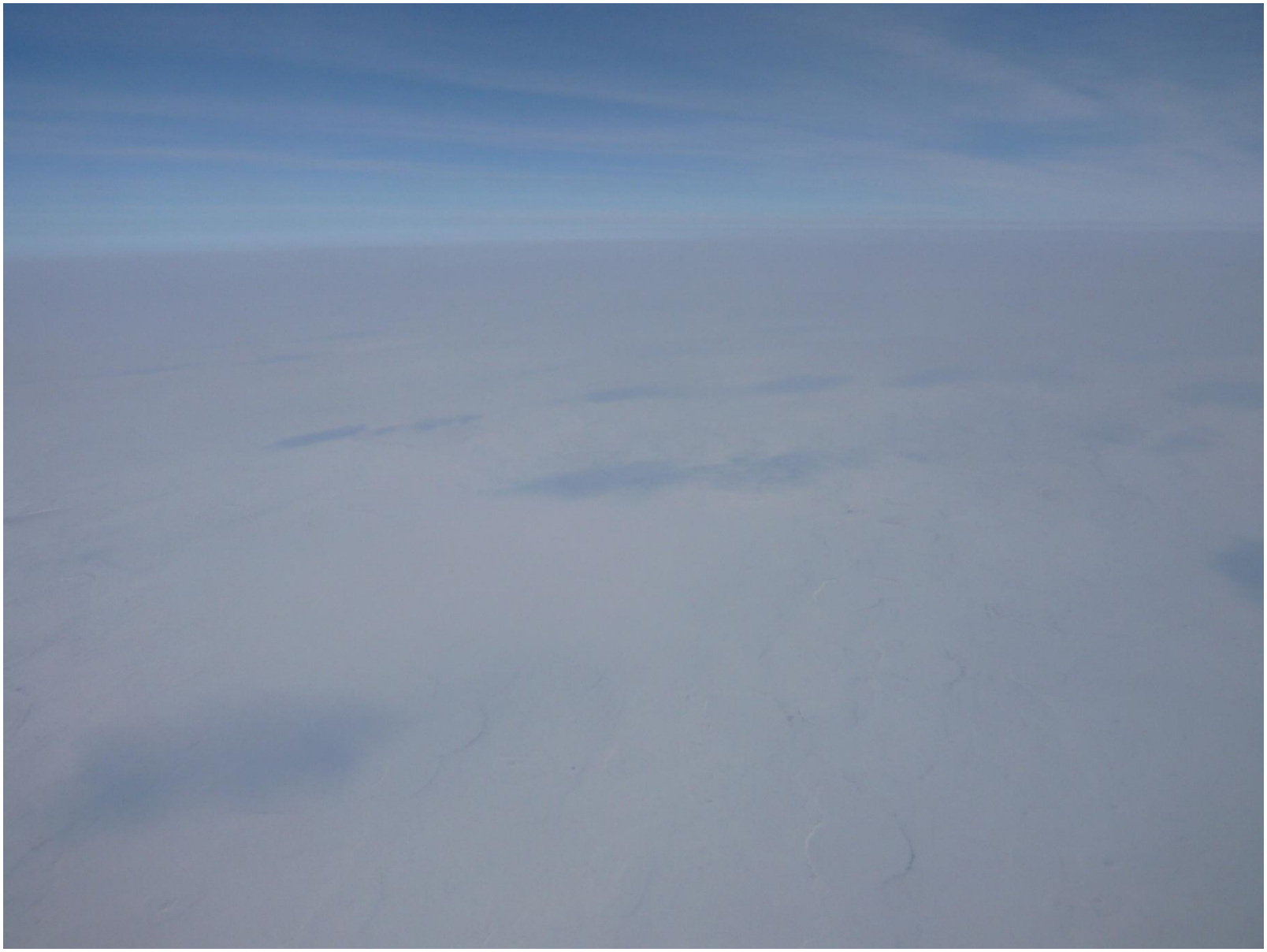

L
< 190 200 210 220 230 240 245 250 255 260 K
NOAA GAC COMPOSITE 11.0 BAND 4 19 APR 08 22 Z NASA LARC

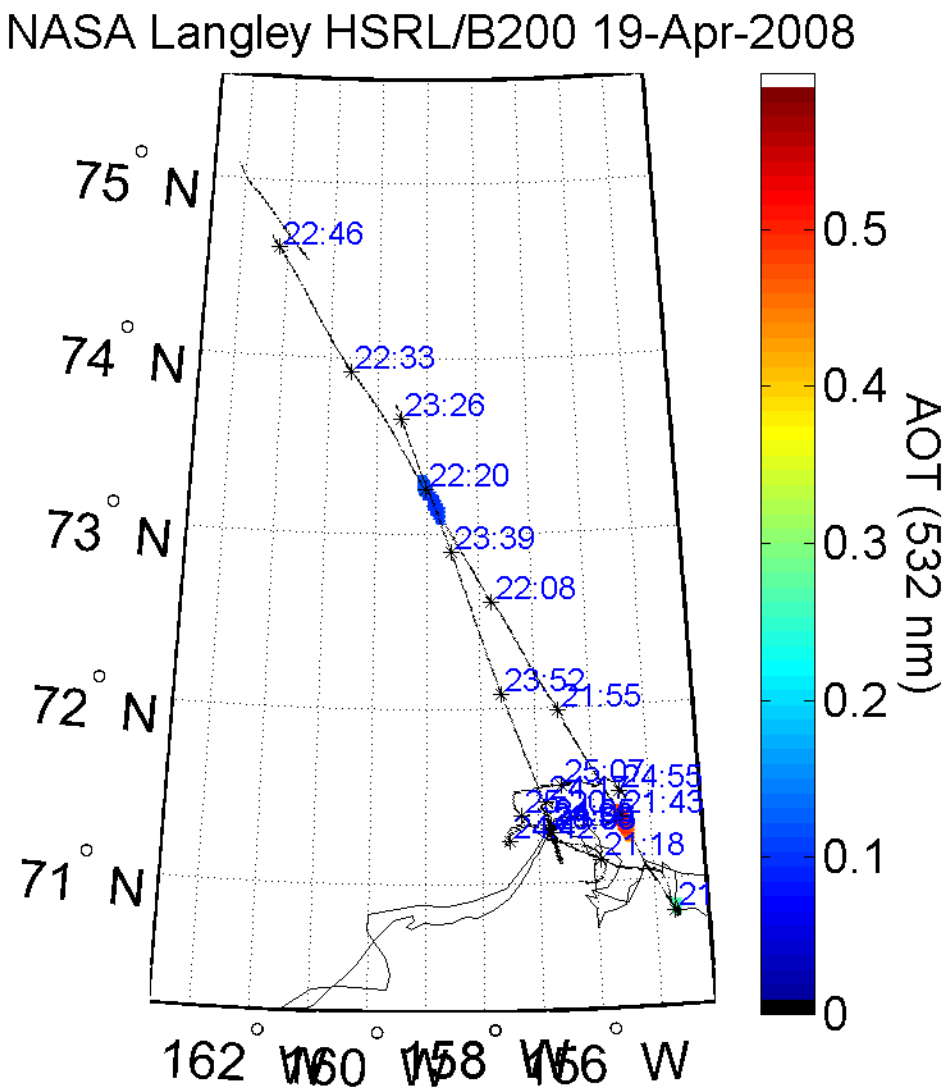
BB-CO on 00 UTC 2008-04-20 at level 500-1000 (3)



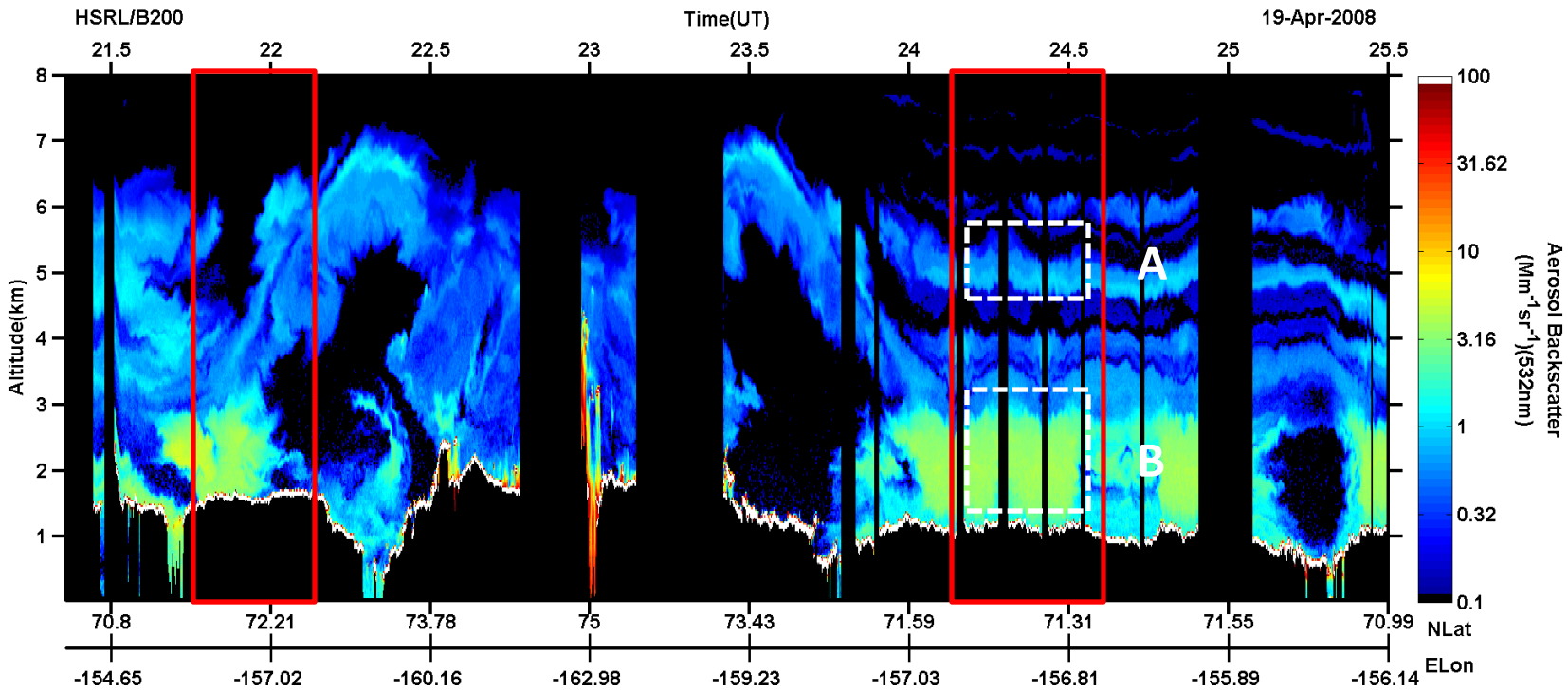

Modis/Terra
visible
L
Barrow

Dan Murphy Visible (From P3)



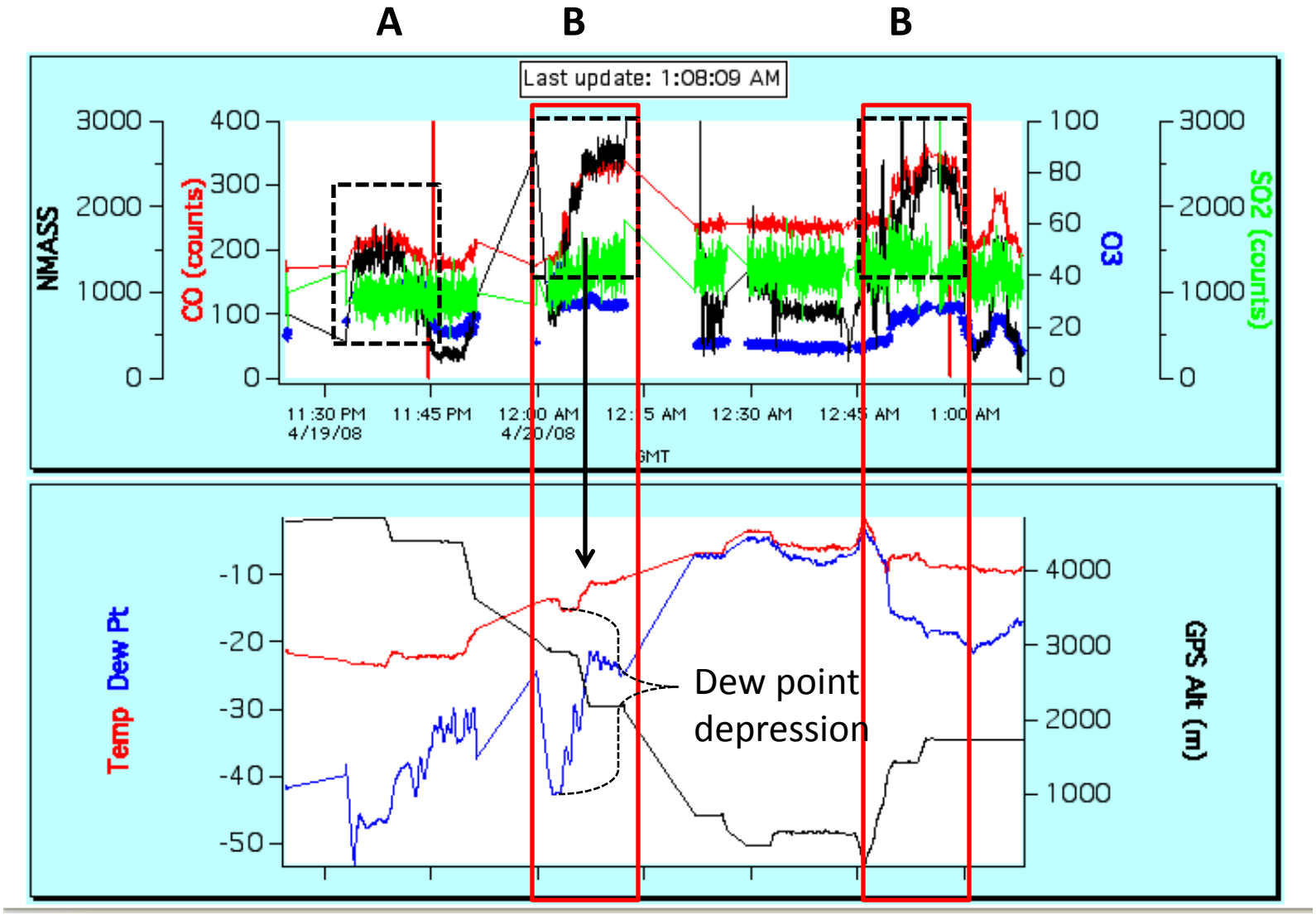

NASA Langley HSRL/B200 19-Apr-2008
75° N
74° N
73° N
72° N
71° N
162° W
160° W
158° W
156° W
22:46
22:33
23:26
22:20
23:39
22:08
23:52
21:55
25:07
24:55
21:43
21:18
0.5
0.4
0.3
0.2
0.1
0
AOT (532 nm)

HSRL Aerosol Backscatter provided by Chris Hostetler (NASA/LaRC)



HSRL sees "water cloud" (based on very high backscatter) at base of sloping aerosol layer during northward Calipso leg

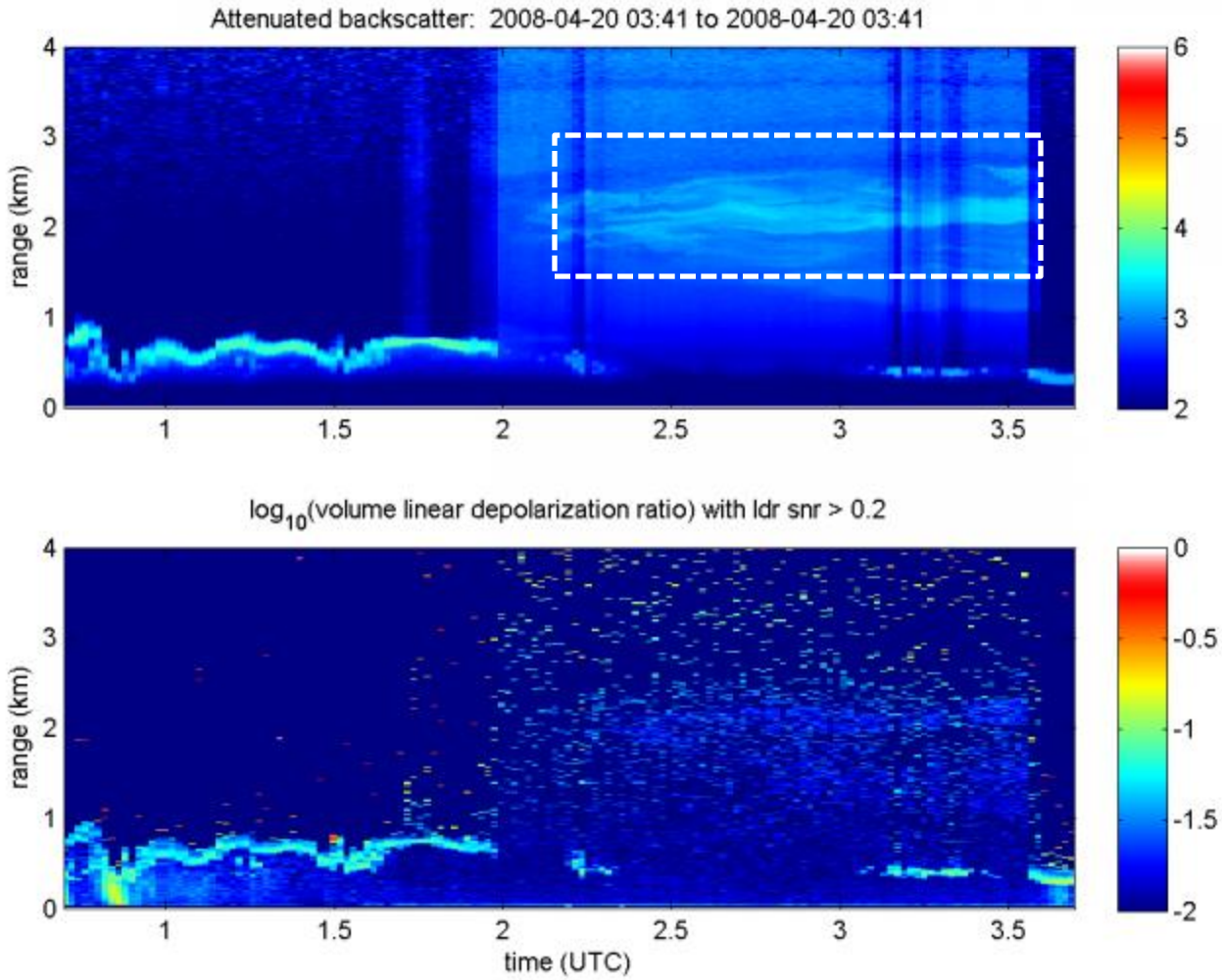
HSRL over P3 during spiral



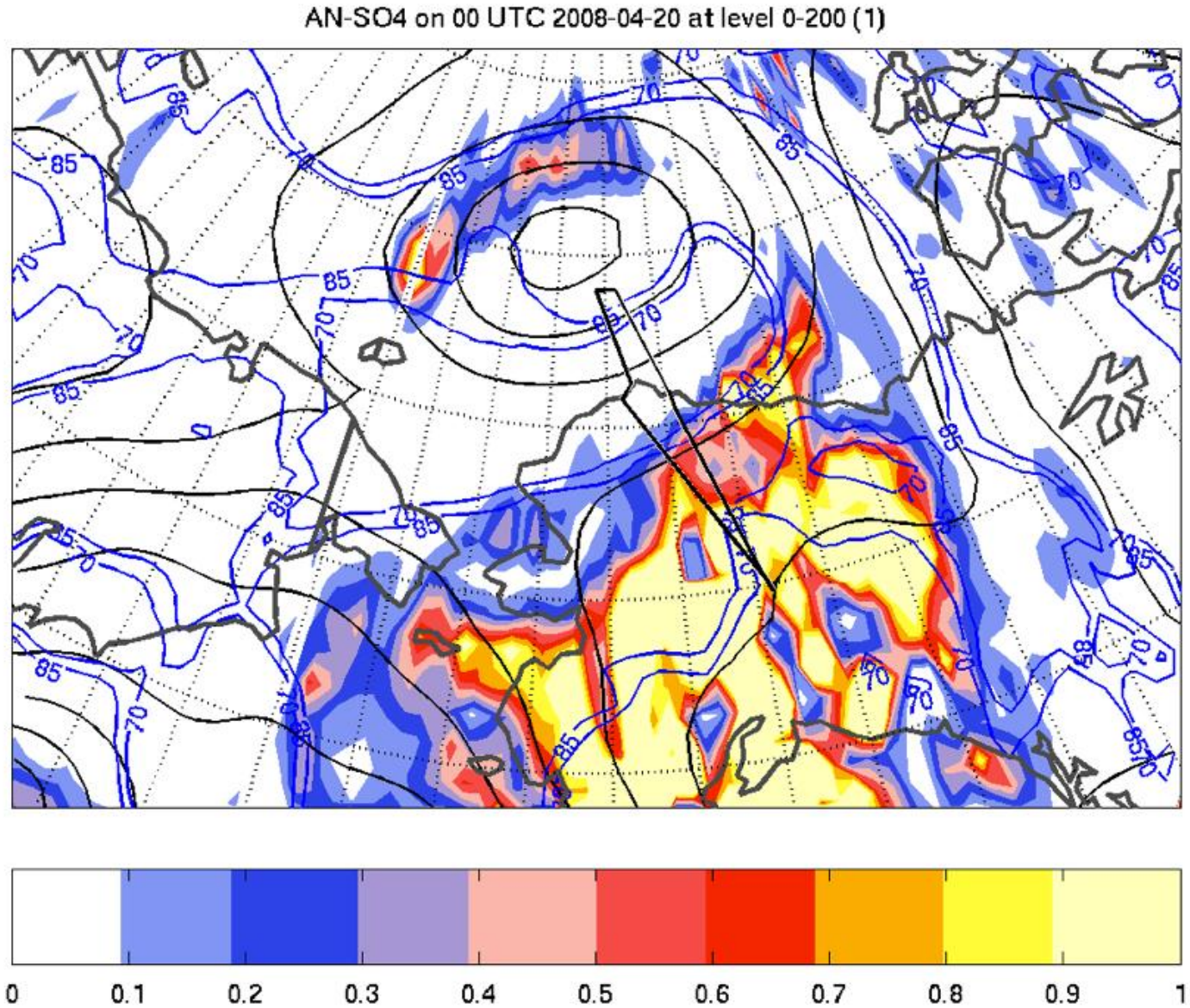
P3 insitu profile says “that’s not a water cloud”

ISDAC Current Barrow Quicklooks

http://nsa.met.psu.edu/sst_web/iops/isdac/current_mmcr_mpl.php



FLEXPART shows significant SO4 loading on return into Fairbanks



Rosey sunset at Fairbanks ends another day during ARCPAC……