

**NEAQS 2004**

**Meteorological summary for Gulf of Maine and northern coastal New  
England**

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**16 July**

February 3, 2006

## General

(From PSU synoptic summary): Low Pressure through the day tracked NE up the St. Lawrence River Valley. Low level winds most of the period were SW 5-10 knots over land and offshore were 10 knots out of the South. Temperatures across the region were very uniform for the period with low temperatures near 17C, and highs near 25C.

Temperature Summary:

ID/High/Low

KPSM/26/17 (Pease)

44005/18/17 (Gulf of Maine Buoy)

## Ozone and CO

Modest levels of CO and ozone were observed at the ship. Ozone had a typical near-source diurnal cycle.

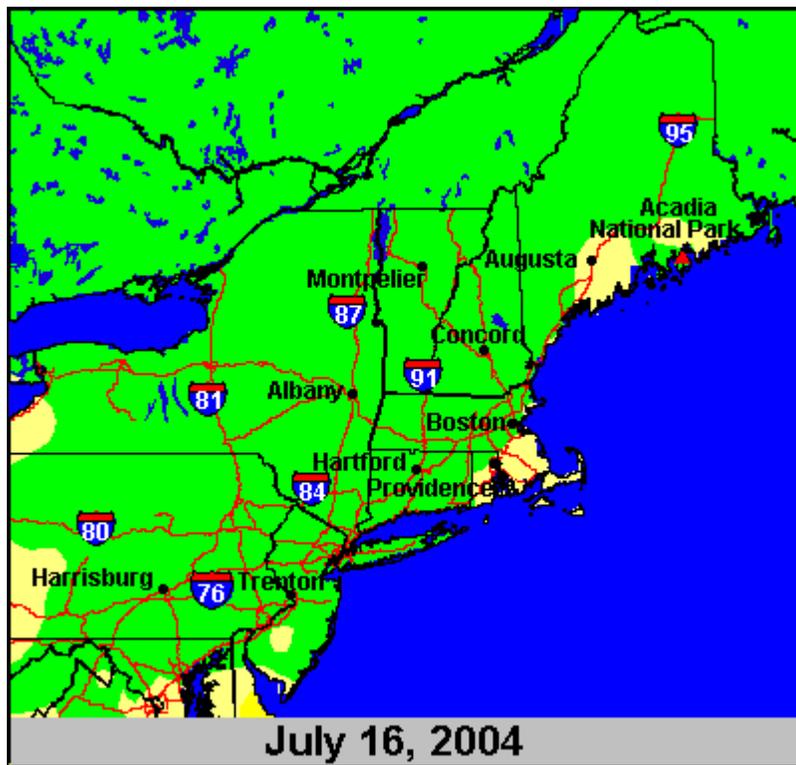


Figure 1: Maximum 1-h surface ozone from EPA AIRNOW

## Footprints

**Footprint S-R-Relationship for flight RHB\_cruise1**

Start time of sampling 20040716. 51901    End time of sampling 20040716. 61901

Lower release height 0 m    Upper release height 30 m

Meteorological data used is 1x1 deg ECMWF analyses

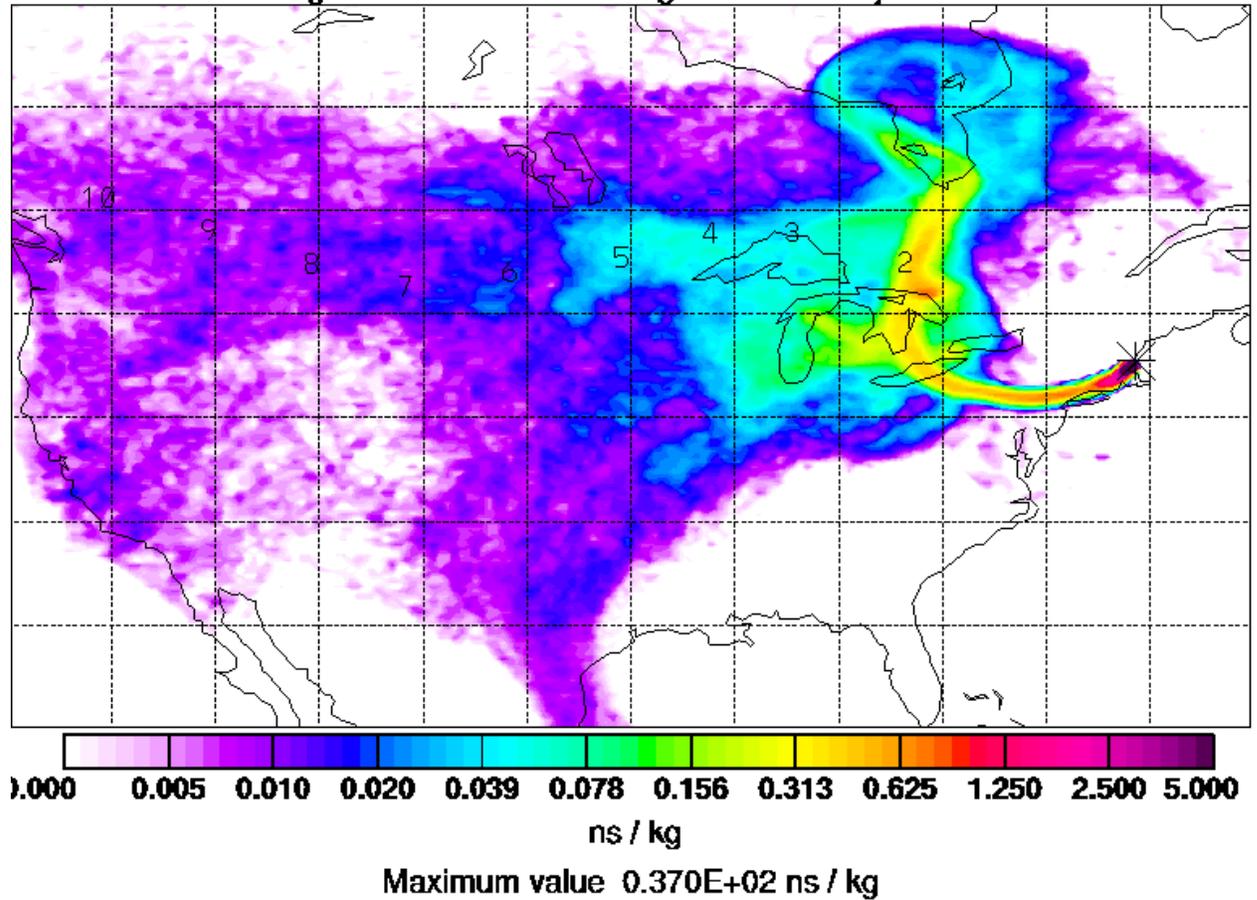


Figure 2: FLEXPART footprint for 0519-0619 UTC

### Footprint S-R-Relationship for flight RHB\_cruise1

Start time of sampling 20040716.111901    End time of sampling 20040716.121901

Lower release height 0 m    Upper release height 30 m

Meteorological data used is 1x1 deg ECMWF analyses

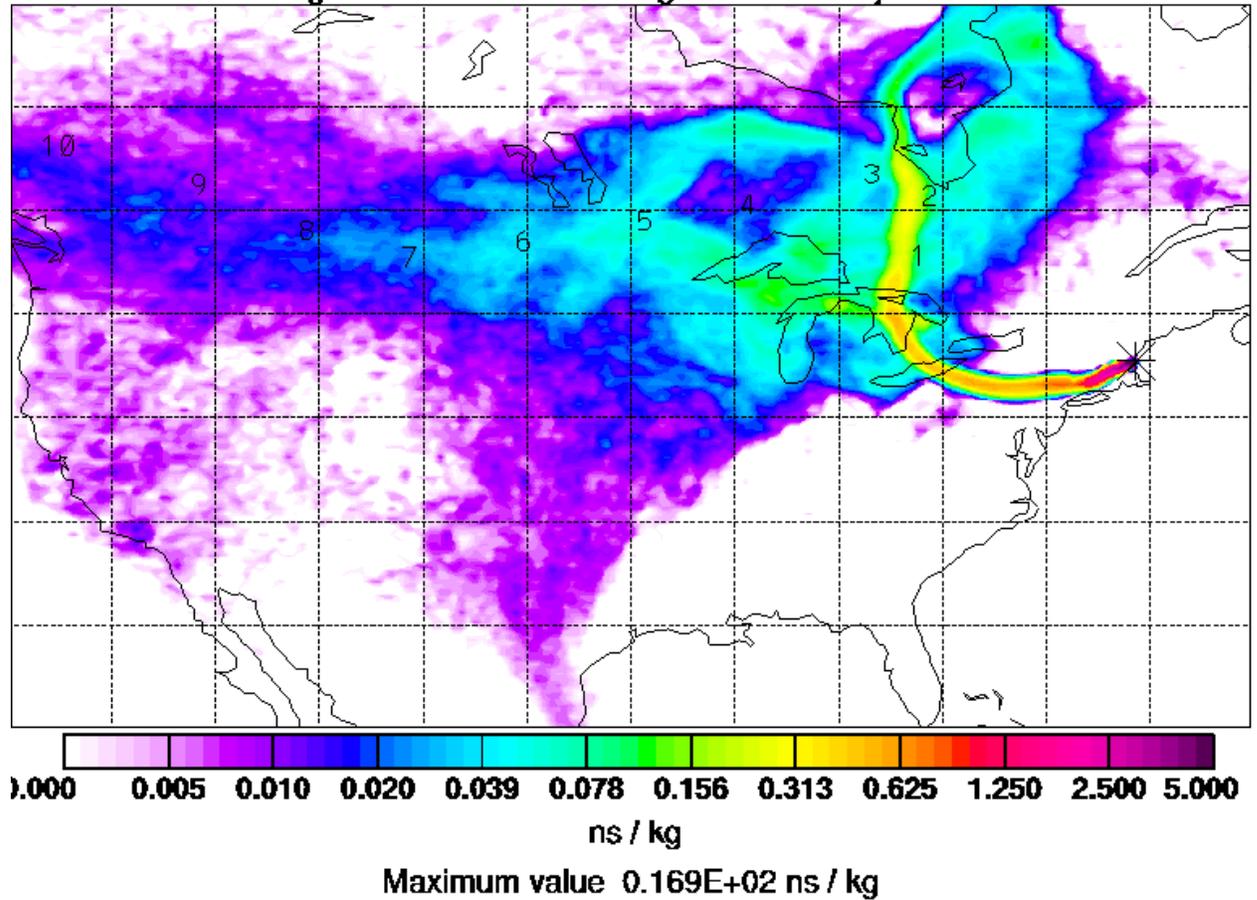


Figure 3: FLEXPART footprint for 1119-1219 UTC

### Footprint S-R-Relationship for flight RHB\_cruise1

Start time of sampling 20040716.173701    End time of sampling 20040716.180601

Lower release height 0 m    Upper release height 30 m

Meteorological data used is 1x1 deg ECMWF analyses

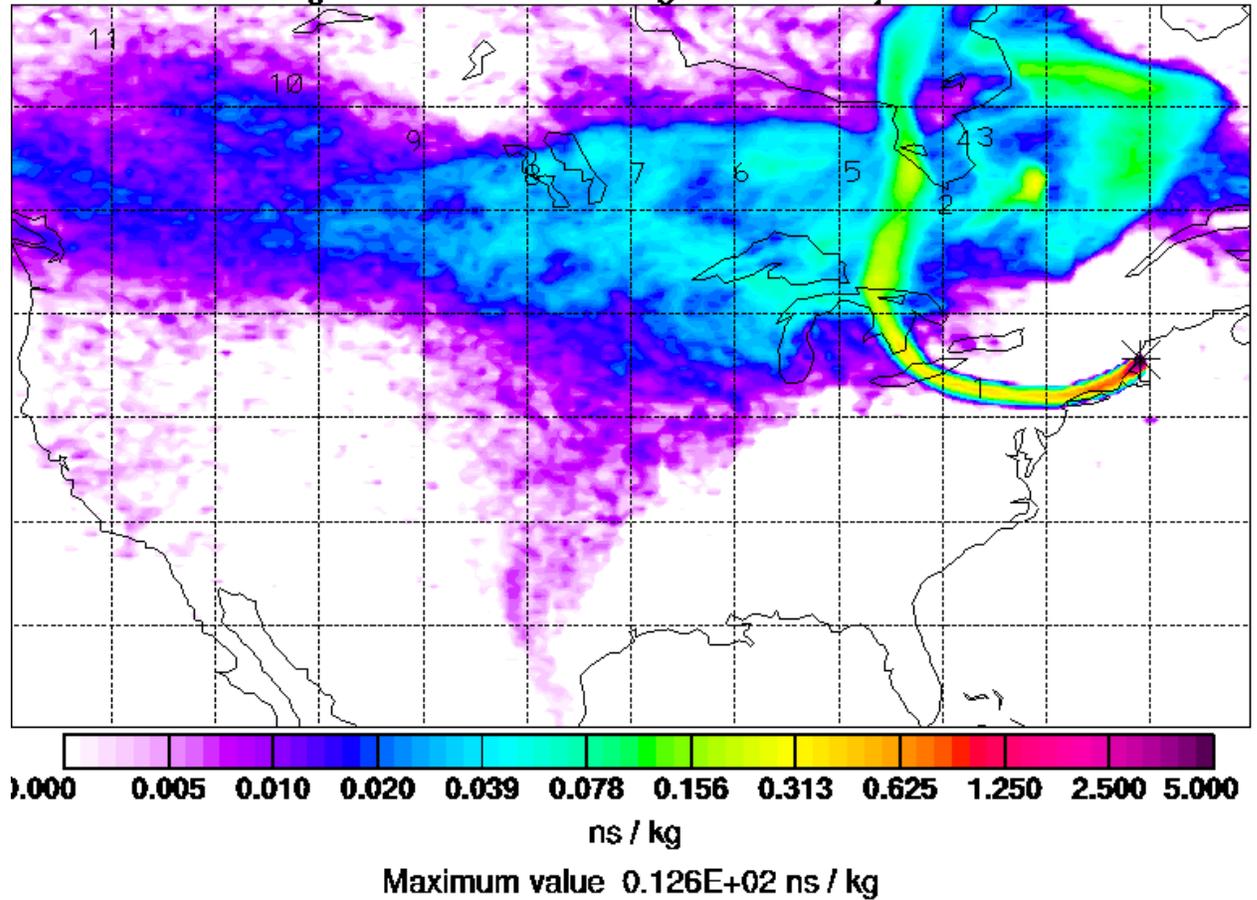


Figure 4: FLEXPART footprint for 1737-1806 UTC

### Footprint S-R-Relationship for flight RHB\_cruise1

Start time of sampling 20040716.233401 End time of sampling 20040717. 701

Lower release height 0 m Upper release height 30 m

Meteorological data used is 1x1 deg ECMWF analyses

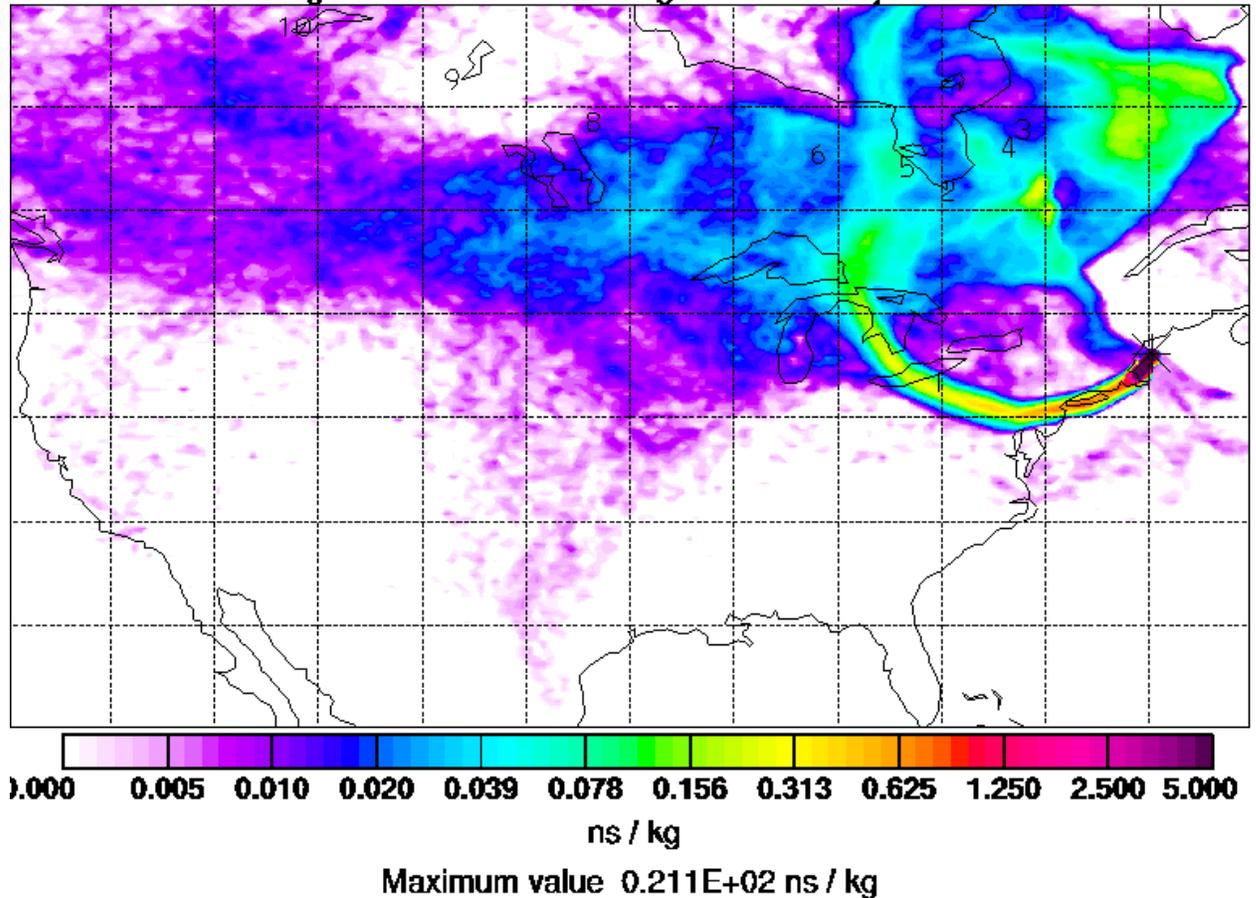
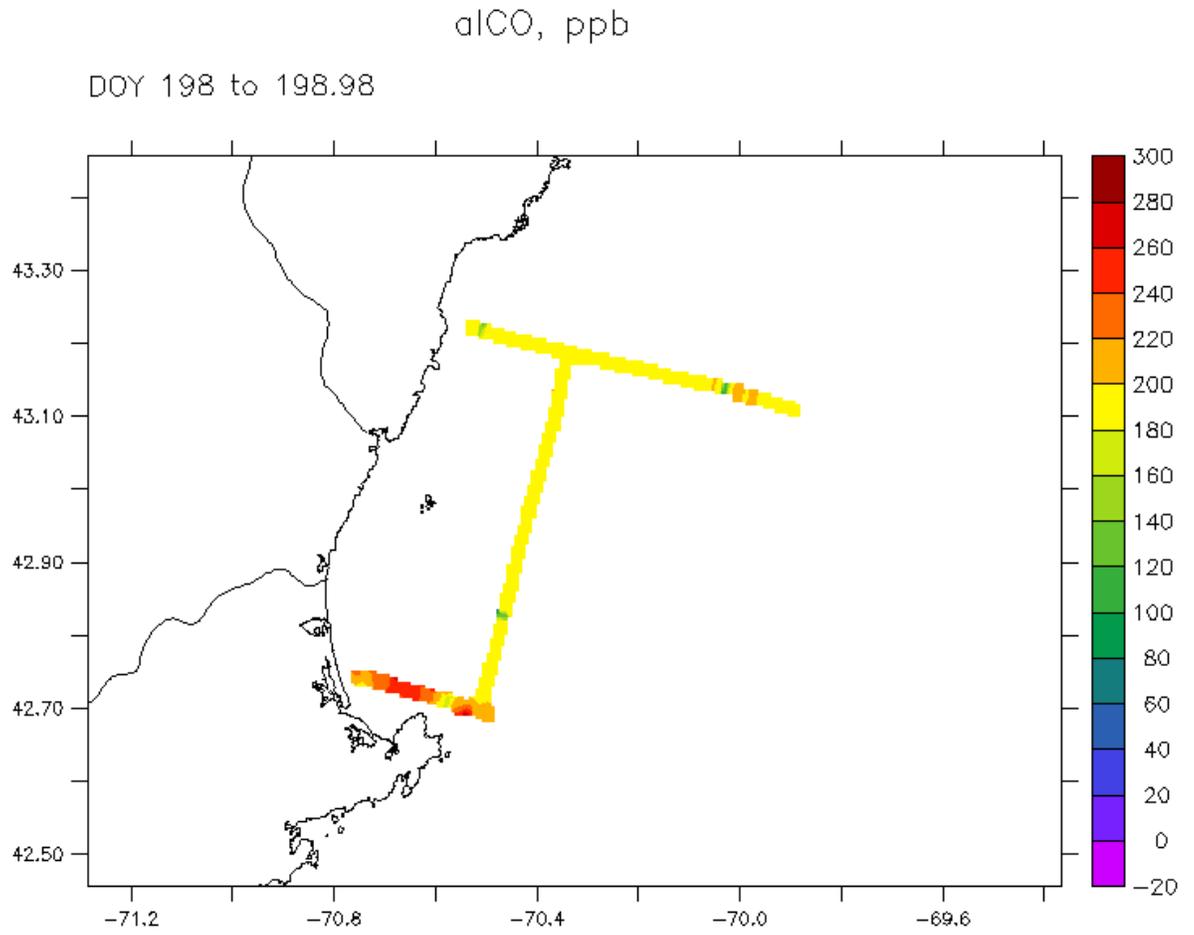


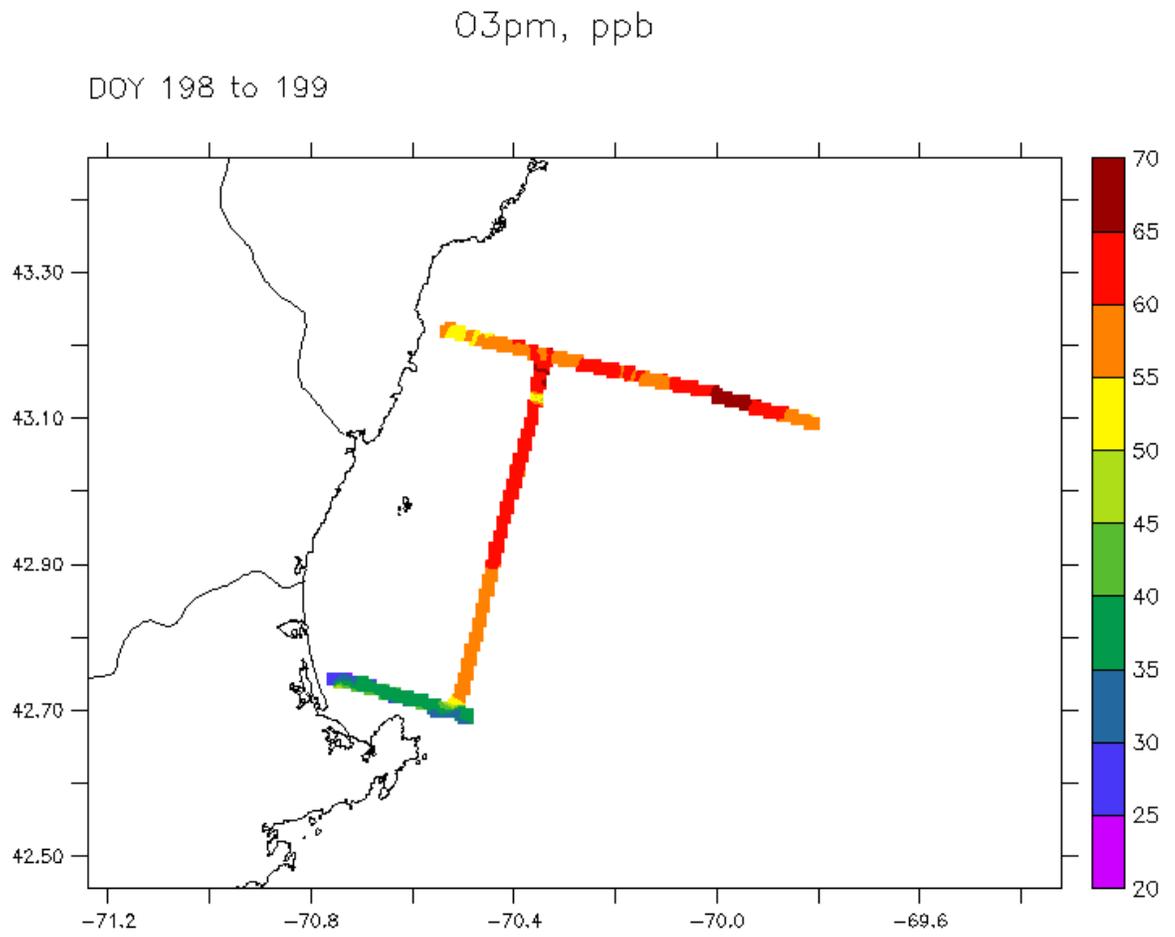
Figure 5: FLEXPART footprint for 2334 UTC 16 July - 0007 UTC 17 July

### Ship track

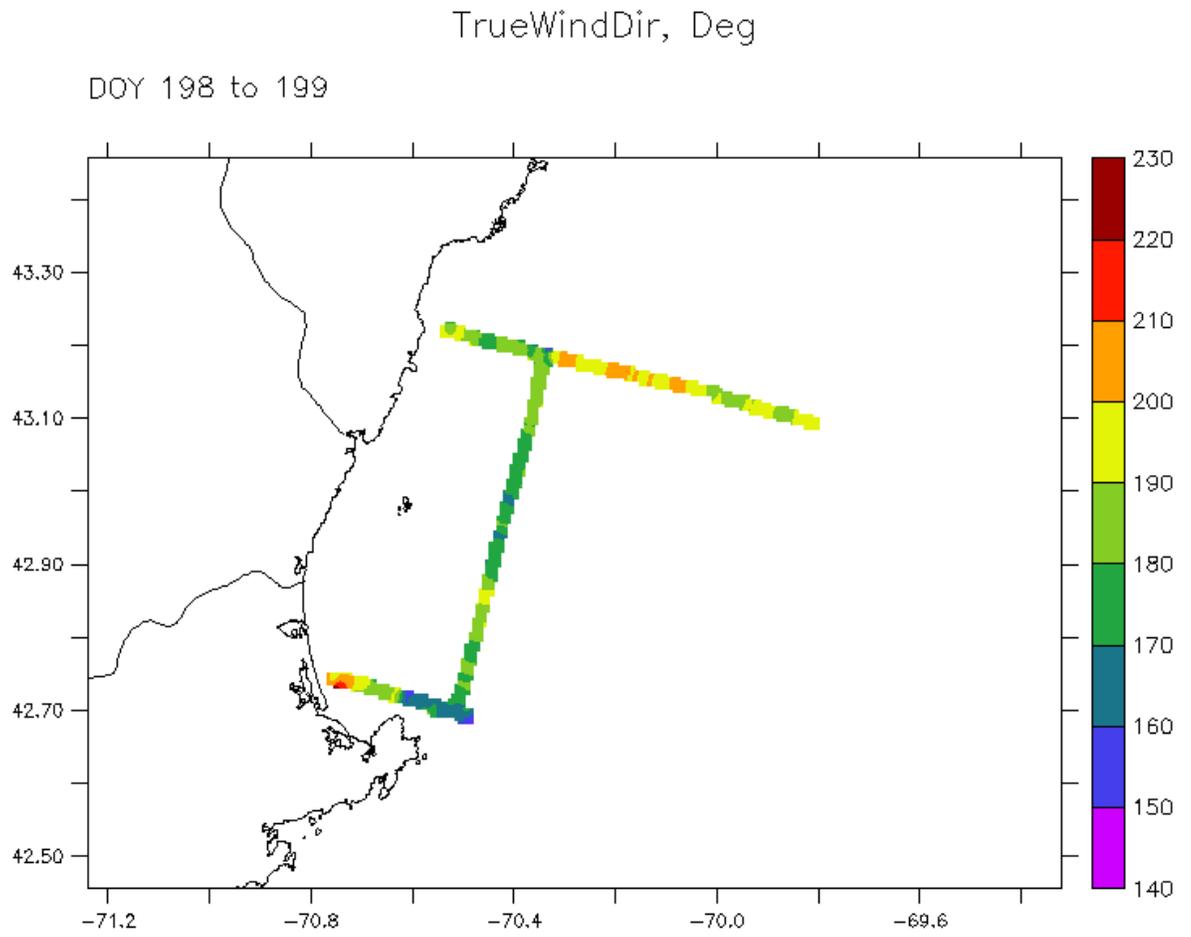
Note that the ship was stationary ~10 km north of Cape Ann (42.74N 70.66W) from 0000 - 1230 UTC.



**Figure 6: CO along the ship track**



**Figure 7: Ozone along the ship track**



**Figure 8: Wind direction along the ship track**