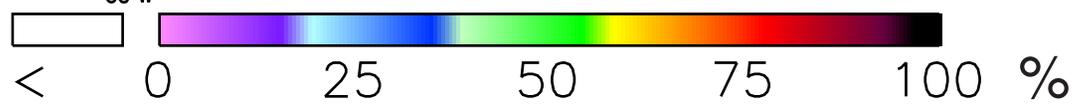
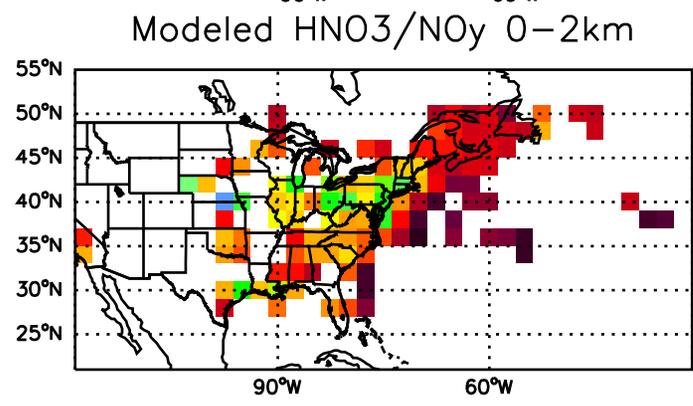
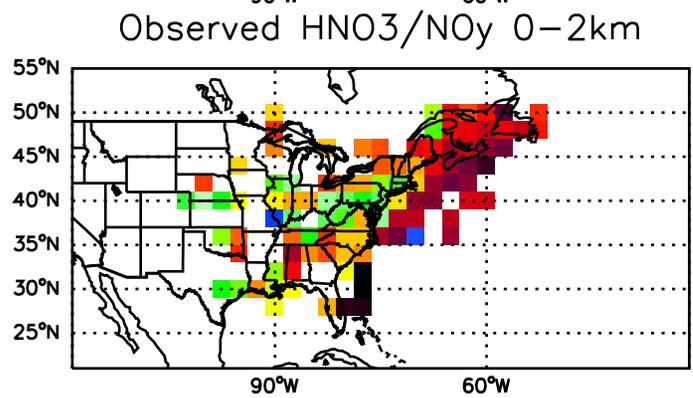
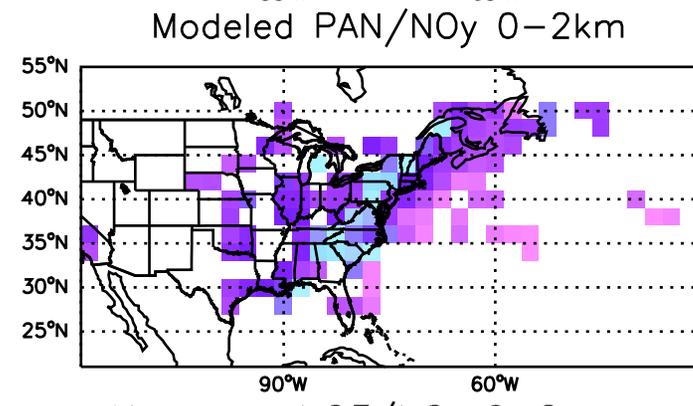
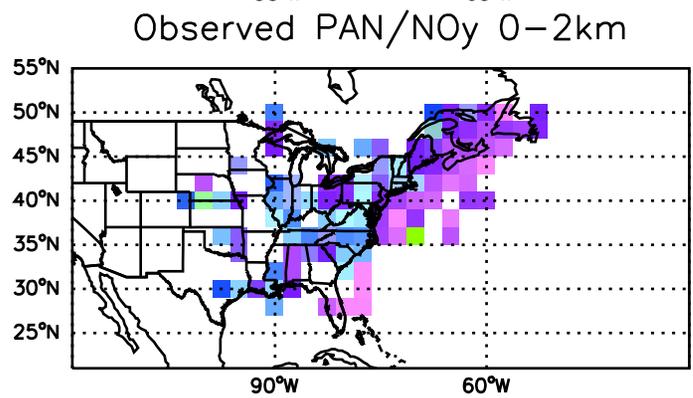
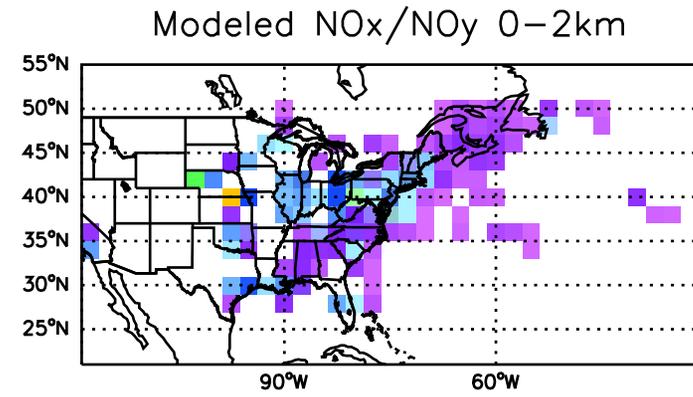
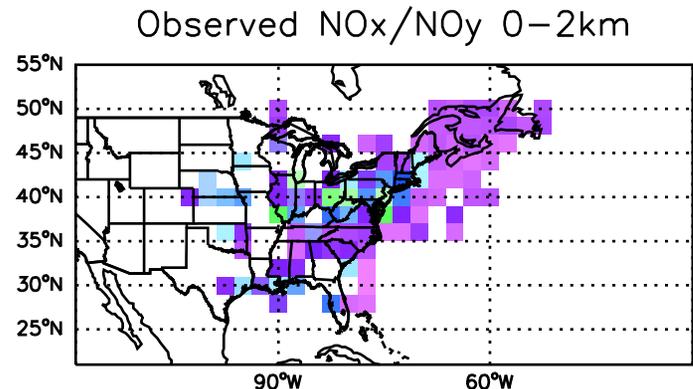


ICARTT 0-2 km NO_y partitioning: *Rapid oxidation of NO_x downwind of continent*



Modeled

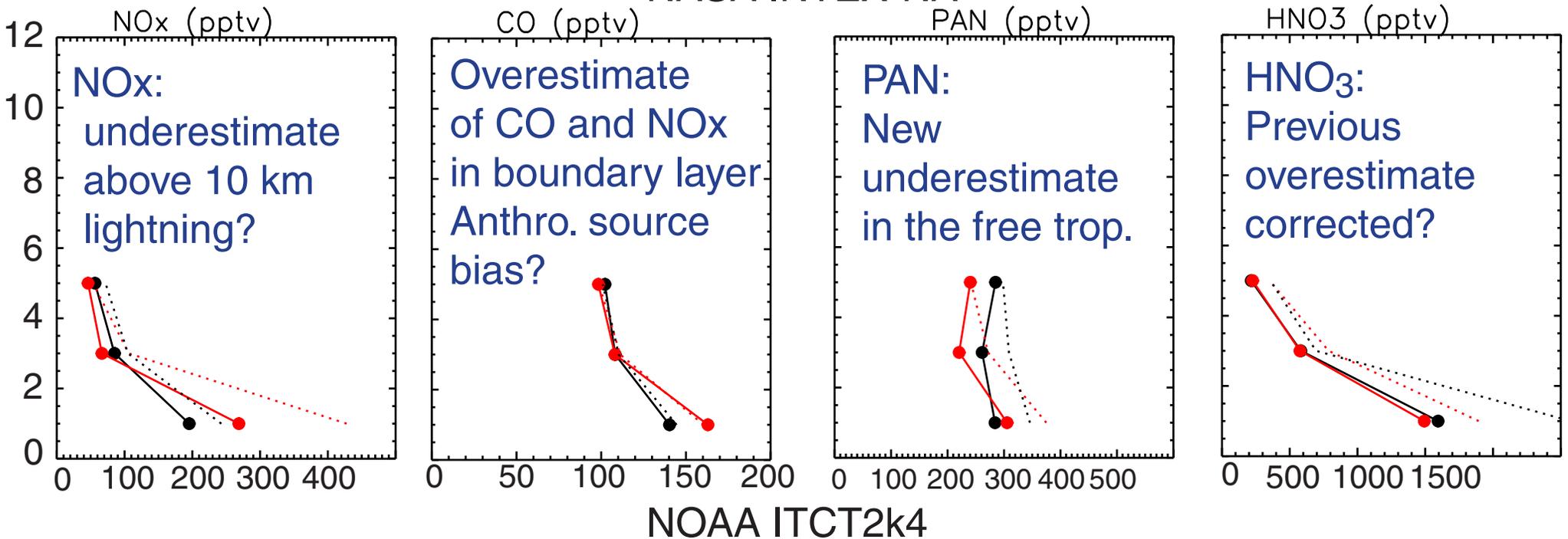
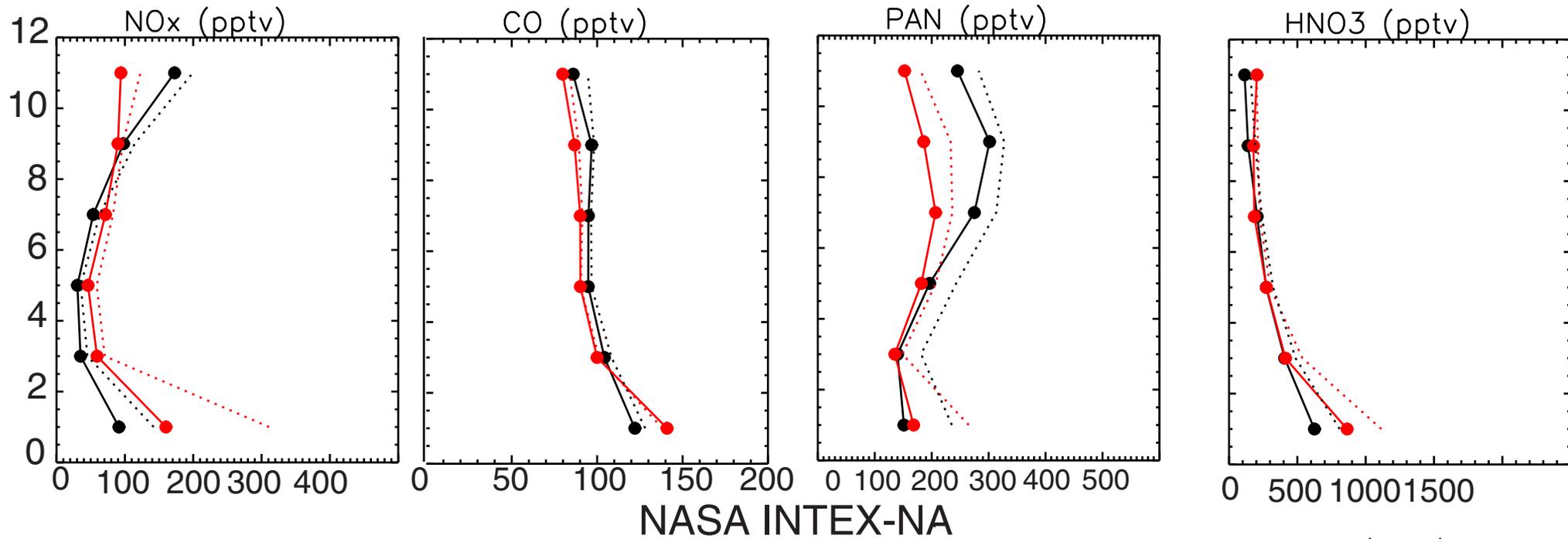
Observed

Dotted: Means

Circles: Medians

GEOS-CHEM vs. INTEX-NA and ITCT2k4:

Comparison along the flight tracks



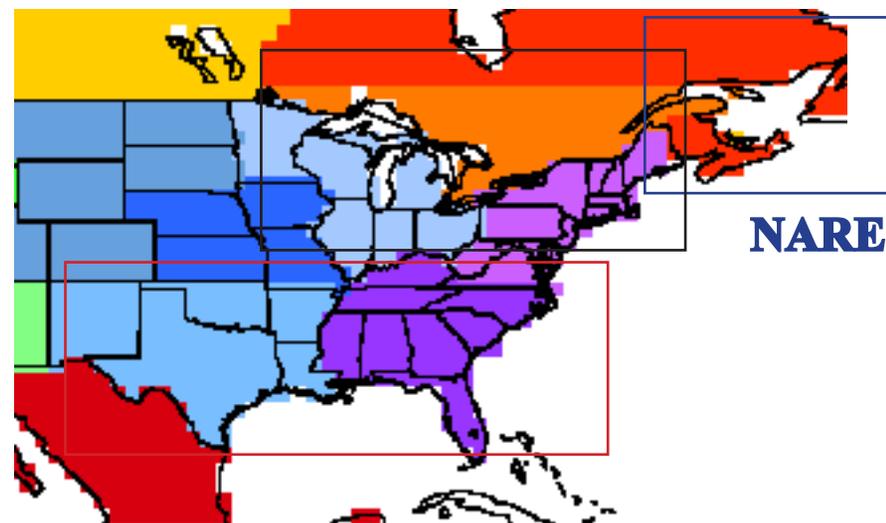
NO_y export efficiency, *f*:

Regional differences in export efficiency

$$f = R \times \frac{[\text{NO}_y] - [\text{NO}_y]_{\text{bkd}}}{[\text{CO}] - [\text{CO}]_{\text{bkd}}}$$

R = anth. emission ratio
 NO_x/CO = 0.153

[CO]_{bkd} = 75 ppbv,
 [NO_y]_{bkd} = 300 ppt

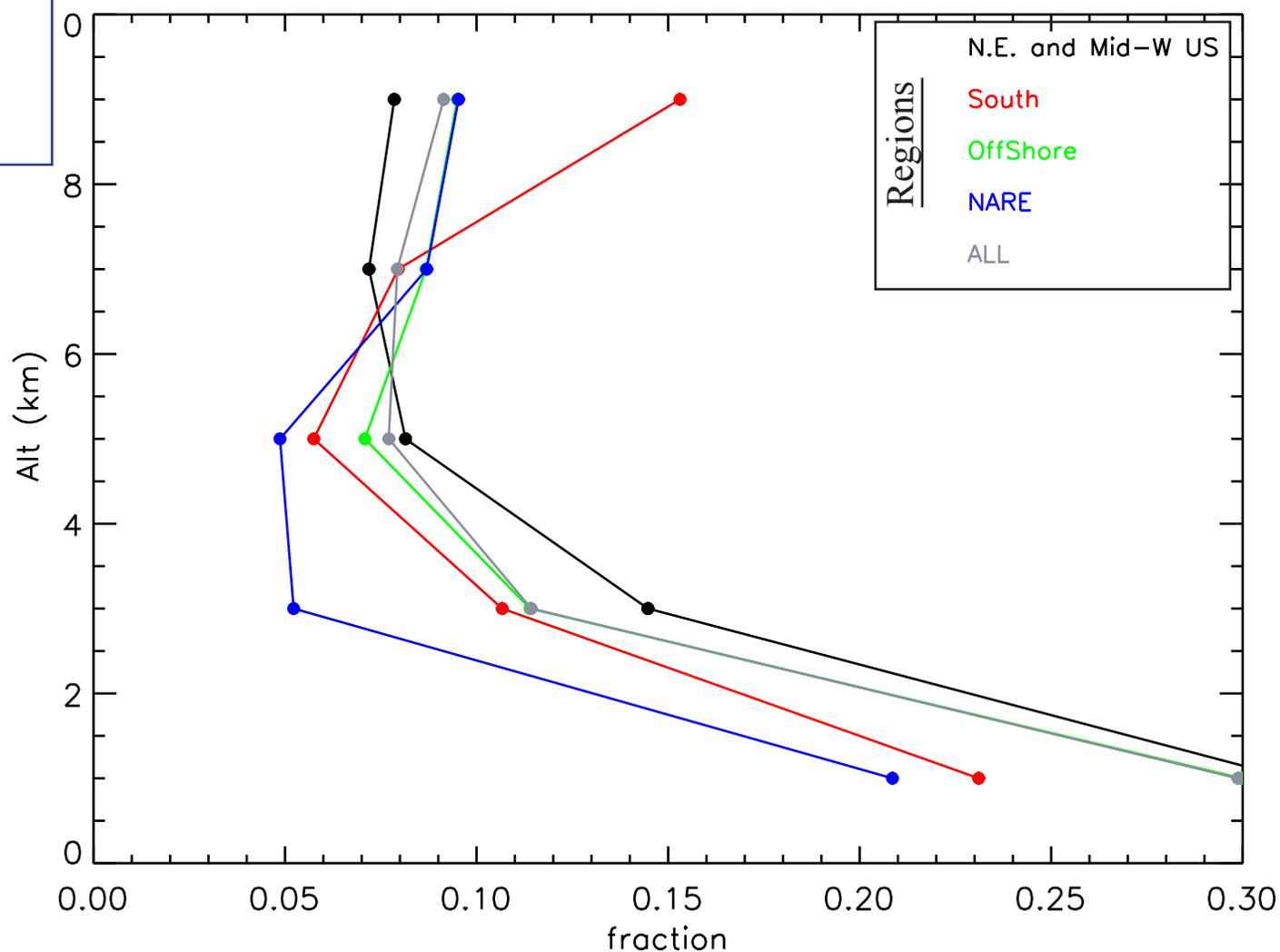


NARE

NARE region has the lowest *f*. Is this a result of uplift over water after NO_y has been removed in MBL?

Is lower export efficiency from southern U.S. a result of stagnation?

**Lower export efficiencies seen than Fall studies...
 ~15%**



Proposed Future Work

1) A multi-platform analysis of the North American reactive nitrogen budget during the ICARTT summer intensive.

- The complete ICARTT data set is an outstanding data set to provide a synthesis of differences in regional distribution of NO_y export and partitioning

2) Impact of North American pollution on global ozone and transatlantic transport

- What are the implications of this export of NO_y and ozone precursors to global ozone and transatlantic transport?