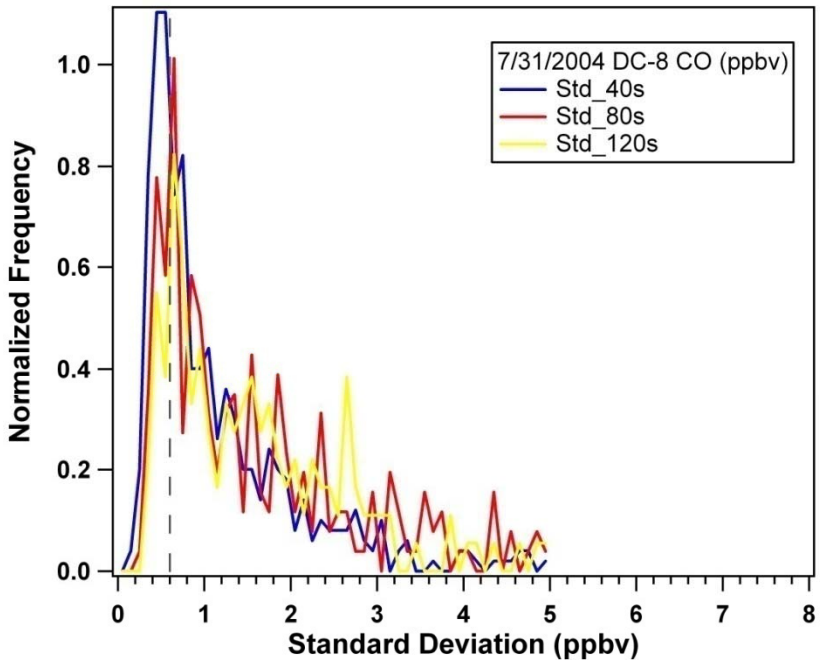
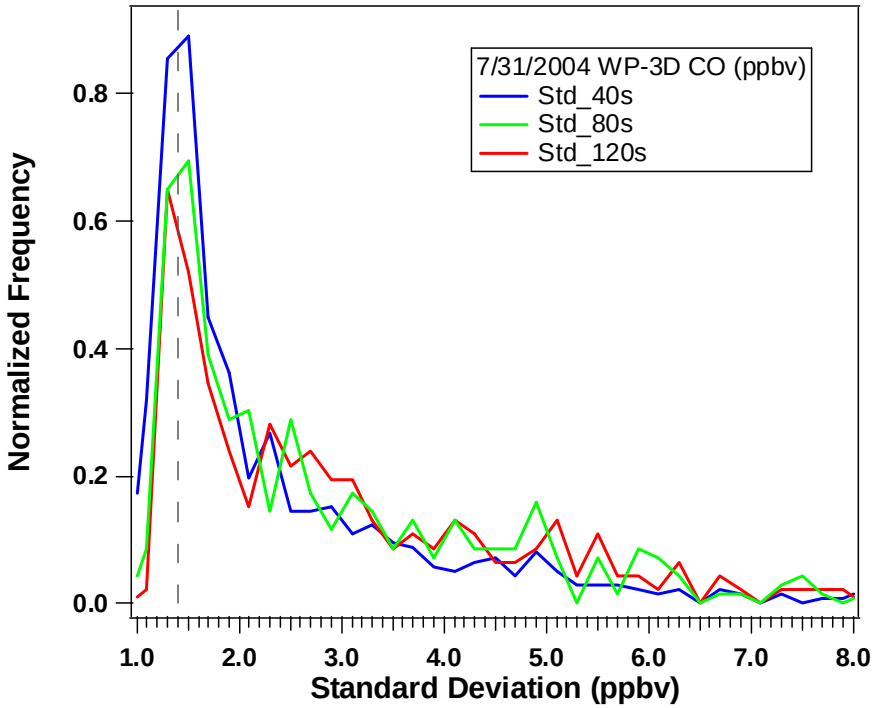




Estimated CO Absolute Precision

Date	DC-8 (ppbv)	WP-3D(ppbv)
07/22/2004	0.7	1.7
07/31/2004	0.6	1.4
08/07/2004	0.4	1.7

BAE-146: 0.3 ppbv

Estimated CO Relative Precision

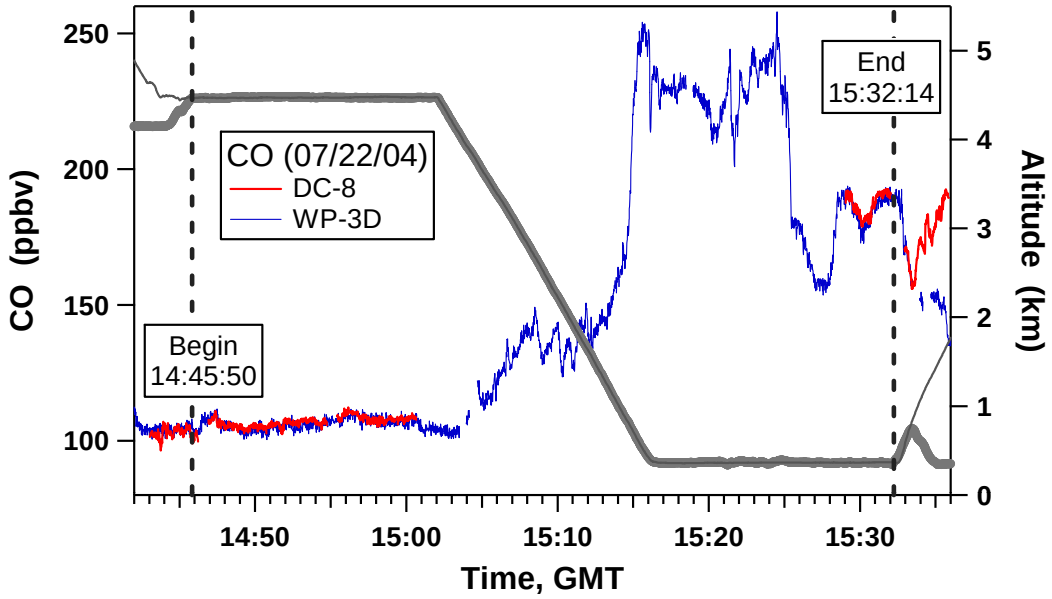
Date	DC-8	WP-3D
07/22/2004	0.85%	1.2%
07/31/2004	0.76%	1.8%
08/07/2004	0.55%	1.4%

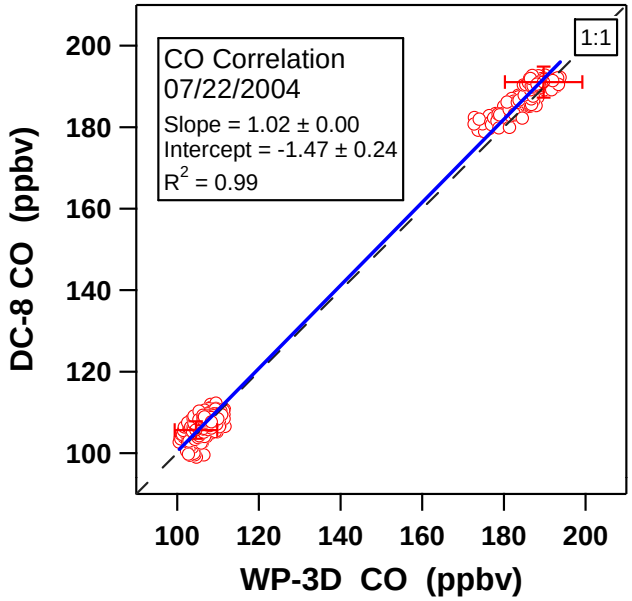
Note: impact of ambient variation is limited by varying averaging time intervals, but not excluded.

PI Reported Uncertainty

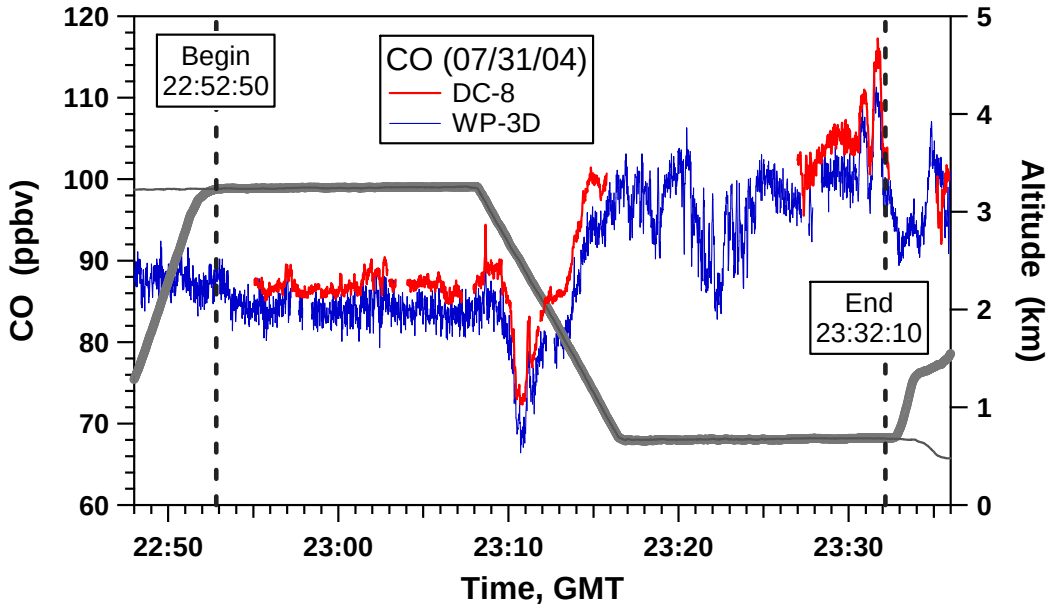
DC-8: 2% or 2 ppbv
WP-3D: 5%
BAe-146: ??

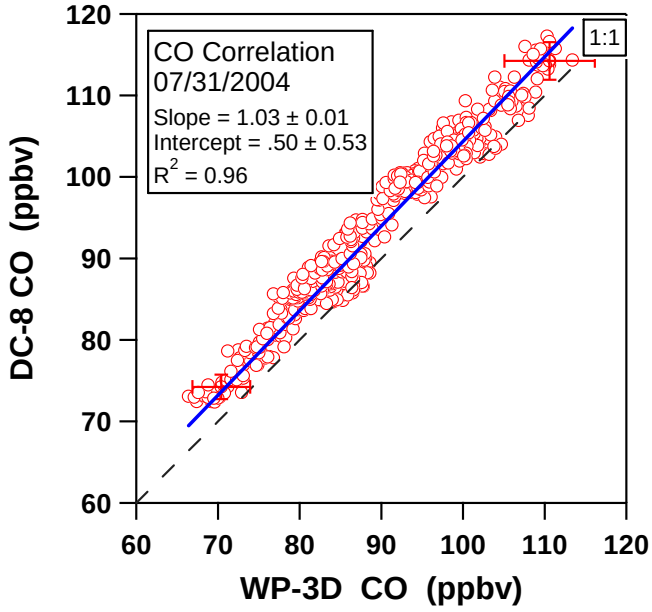
ICARTT CO Measurement Comparison: DC-8 vs. WP-3D 07/22/04



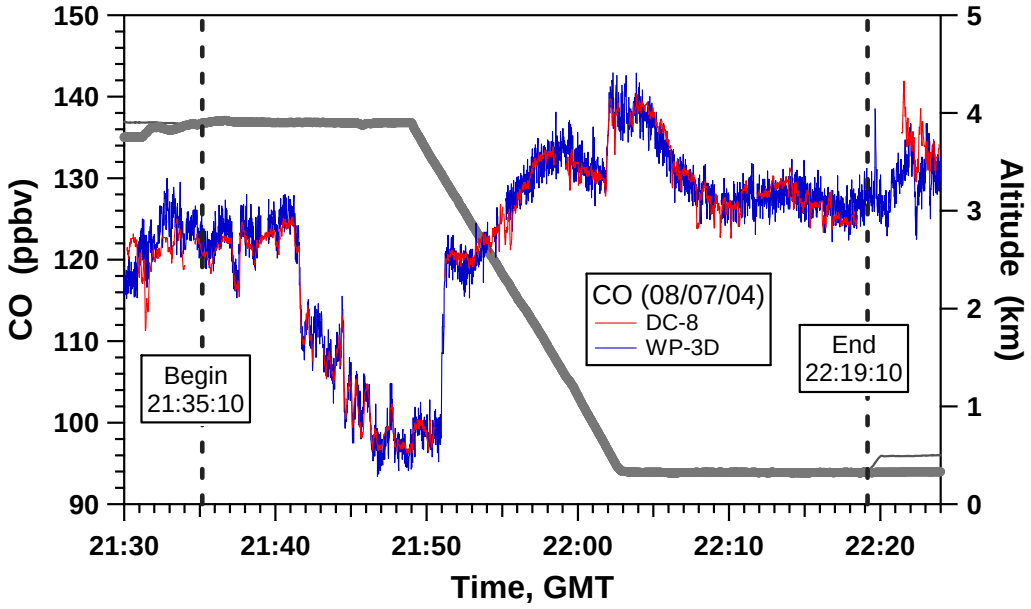


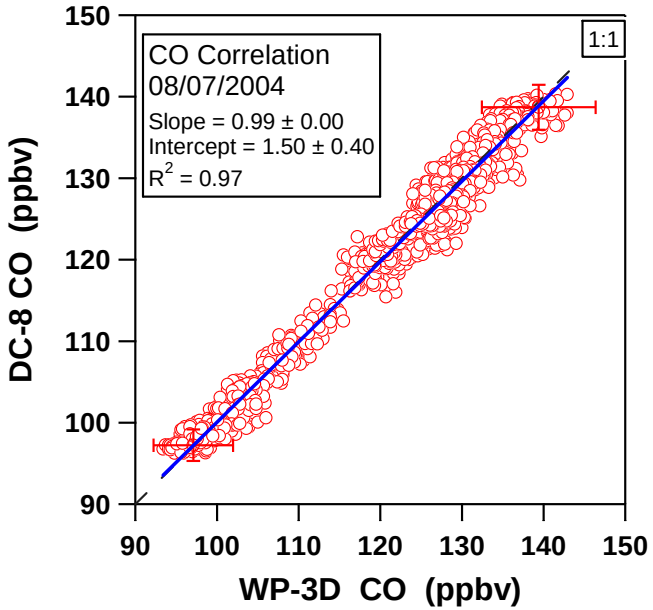
ICARTT CO Measurement Comparison: DC-8 vs. WP-3D 07/31/04



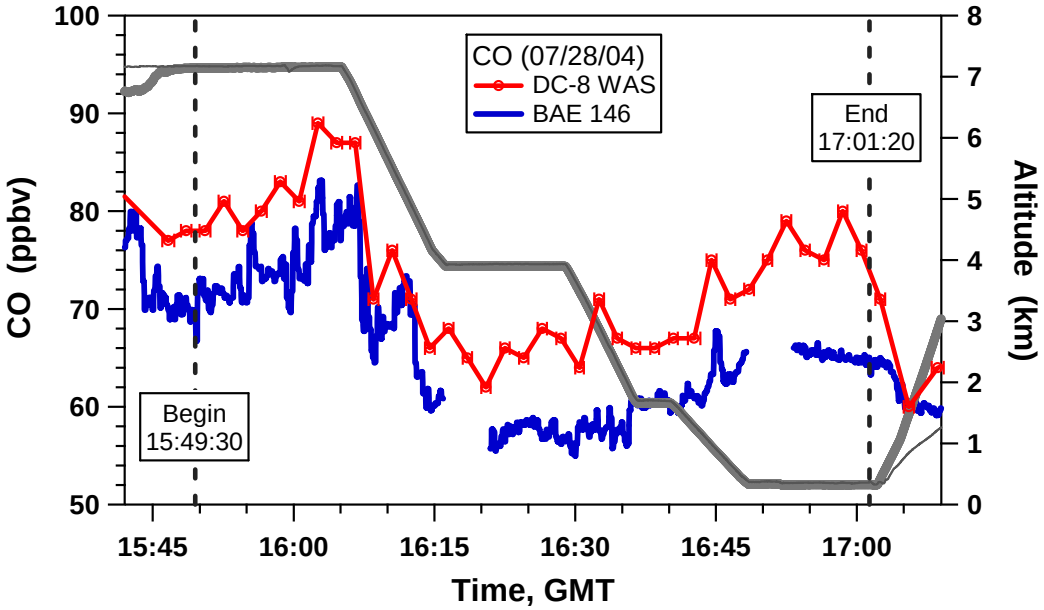


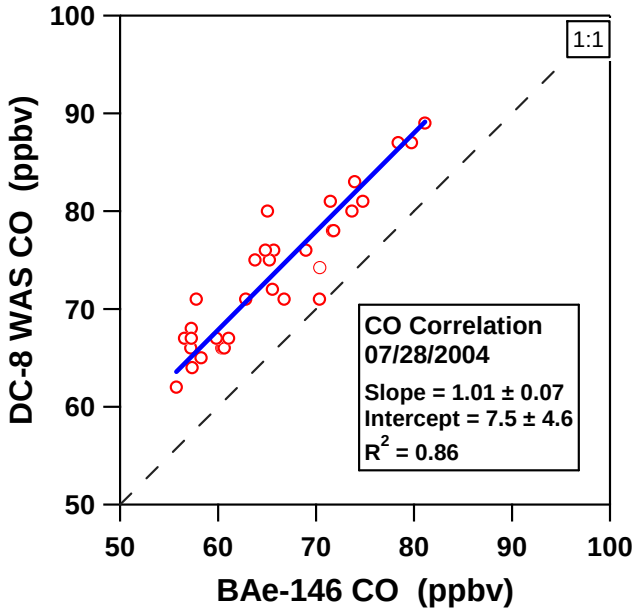
ICARTT CO Measurement Comparison: DC-8 vs. WP-3D 08/07/04

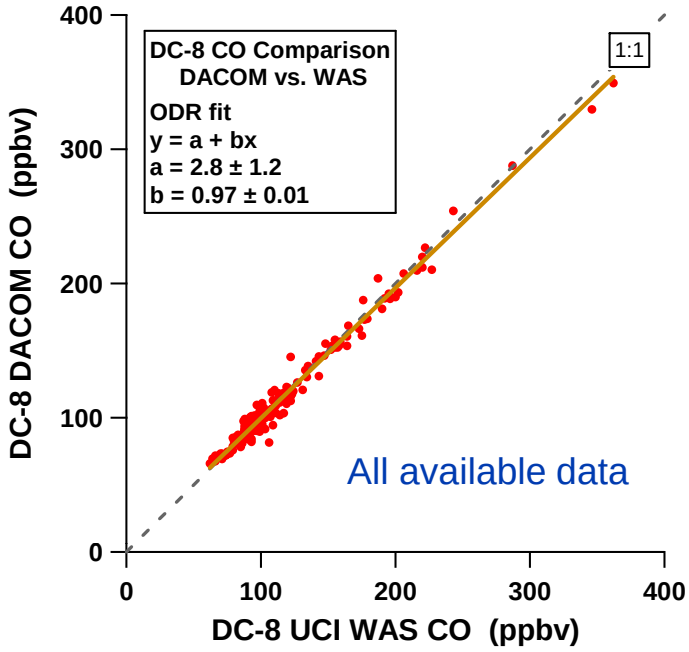


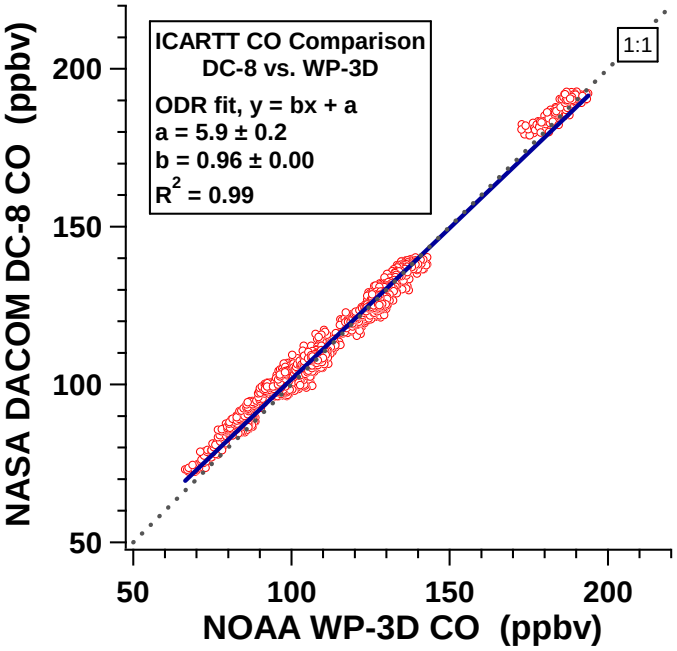


ICARTT CO Measurement Comparison : DC-8 vs. BAe-146 07/28/04

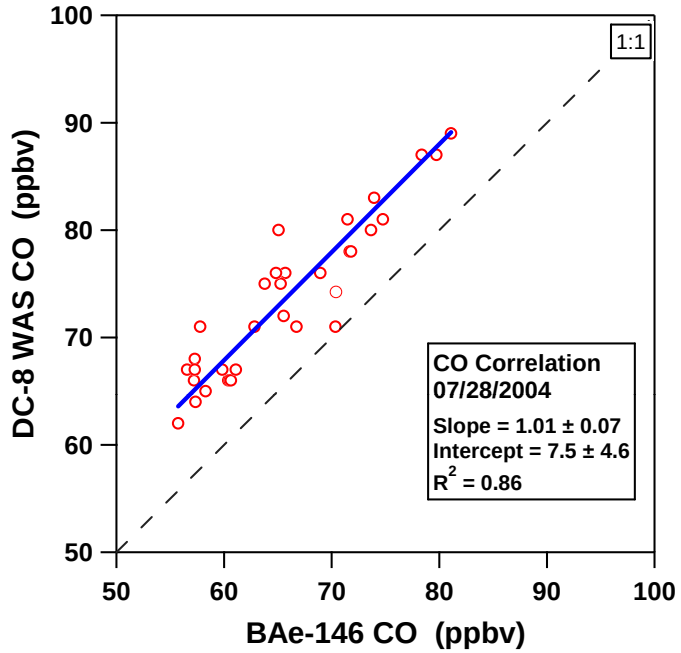








ICARTT CO Measurement Consistency Assessment Summary



It can be derived:

DC-8 DACOM vs. BAe-146
y = (0.98 ± 0.07) x + (10.1 ± 4.6)

WP-3D vs. BAe-146
y = (1.02 ± 0.01) x + (4.3 ± 4.8)

Projected CO measurement difference

DC-8 DACOM	WP-3D	BAe-146
60	56	52
120	119	111
360	370	349

Draft Panel Assessment

- All CO measurements are adequately precise.
- Two independent DC-8 CO measurements highly consistent, which gives confidence in terms of measurement accuracy.
- There are finite differences between the measurements.
  - DC-8 DACOM and WP-3D are mostly in agreement within the combined uncertainties, but the difference is statistically significant.
  - There appears to be a significant difference between BAe-146 and the others, but the comparison itself is quite limited.
- Action Items:
  - Consistency with DLR measurement to be analyzed when data becomes available (Hans is on POLARCAT and then vacation).
  - Recommendation for creating unified and panel recommended database
    - Is there a need to make adjustments between the data sets for model assessment purpose?
  - Instrument description for the Panel Recommendation Report