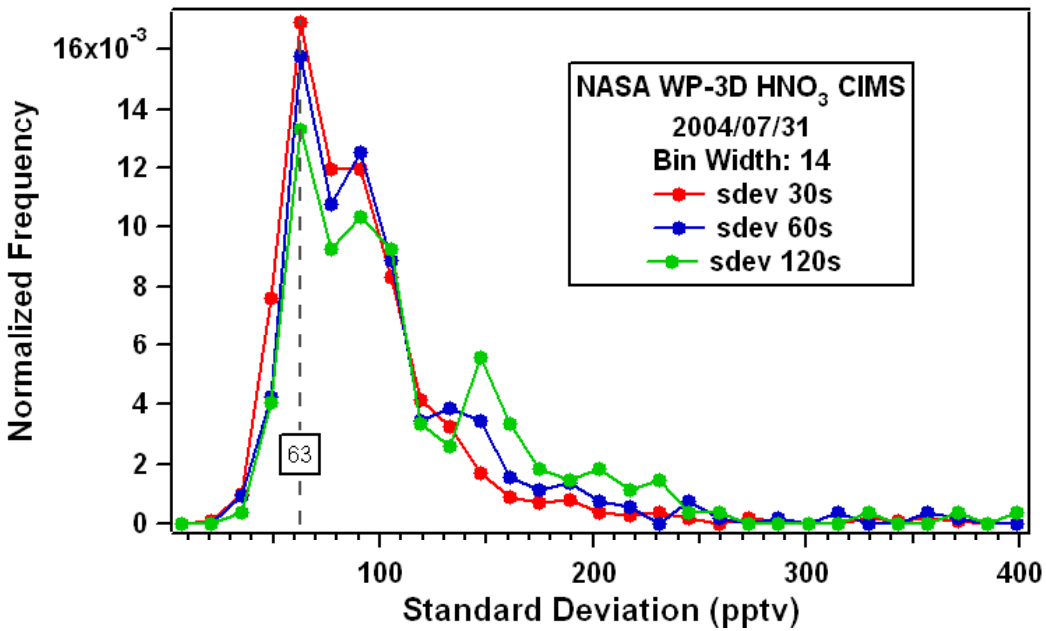
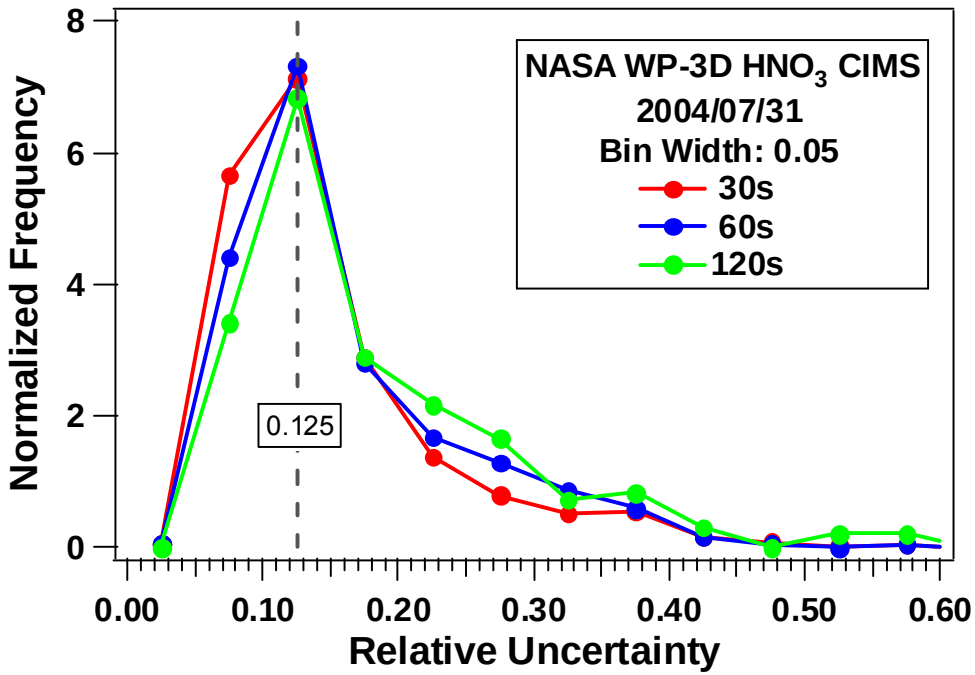




Estimated HNO_3 Absolute Precision

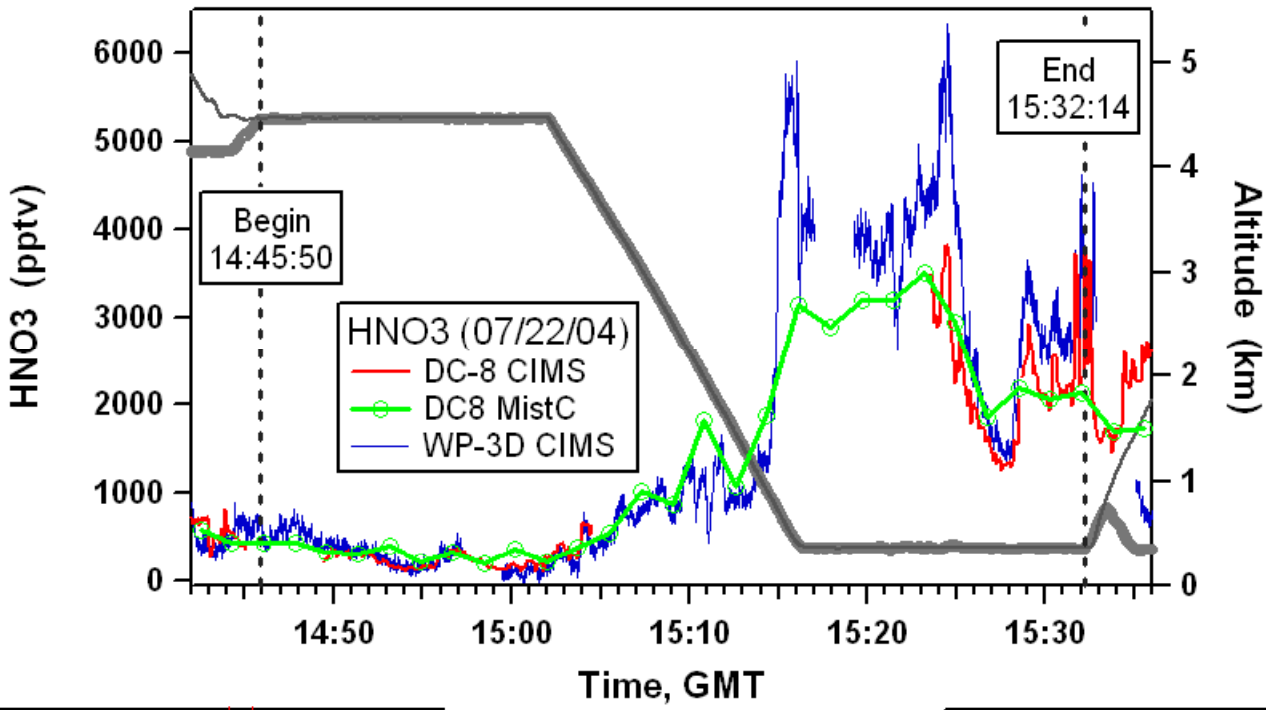
Date	DC-8 (pptv) CIMS	WP-3D(pptv) CIMS	DC-8 (pptv) MC
2004/07/22	18	111	50
2004/07/31	18	63	35
2004/08/07	11	35	11

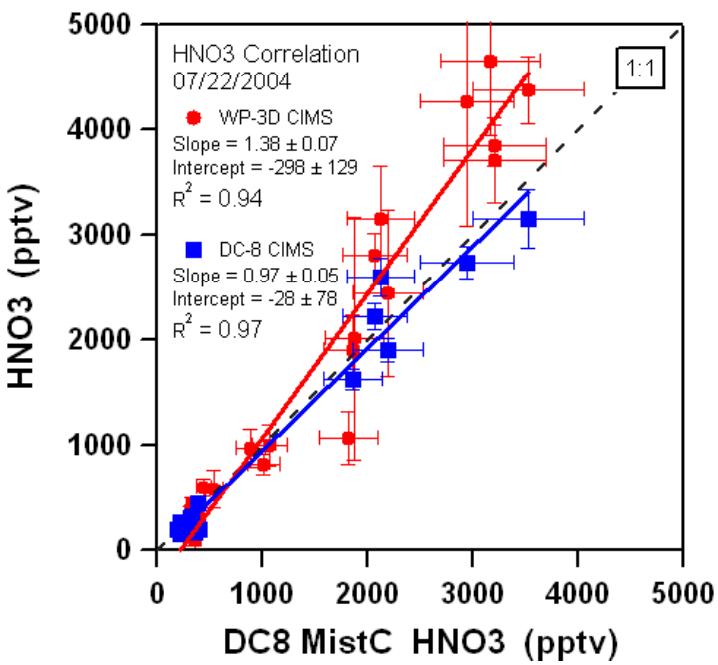
Estimated HNO_3 Relative Precision

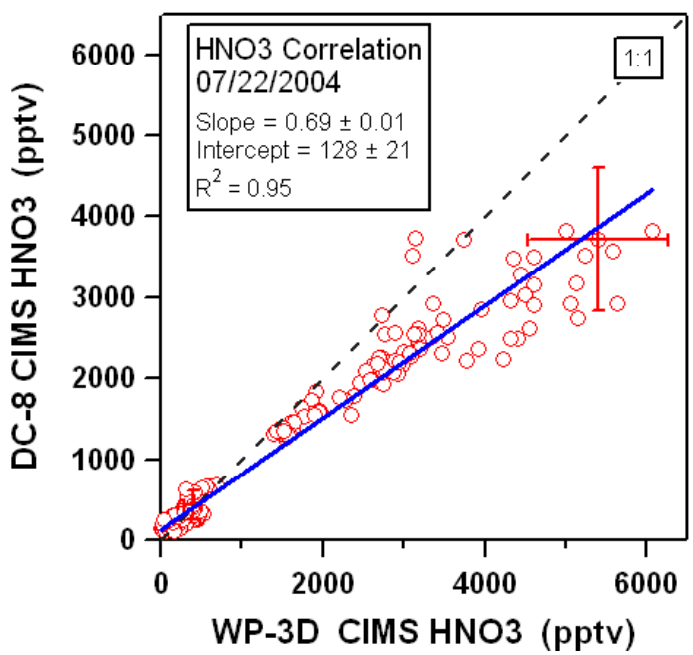
Date	DC-8 CIMS	WP-3D CIMS	DC-8 MC
2004/07/22	7.5%	7.5%	15%
2004/07/31	7.5%	12.5%	15%
2004/08/07	7.5%	7.5%	15%

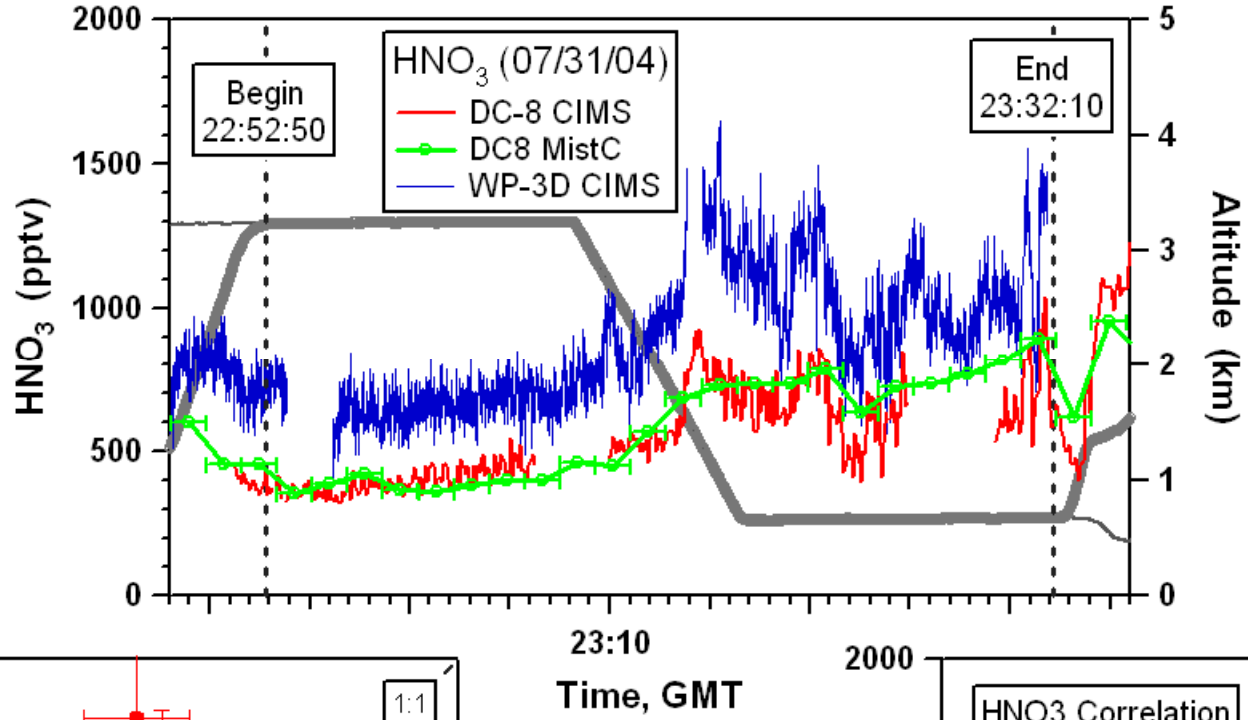
PI Reported Uncertainty

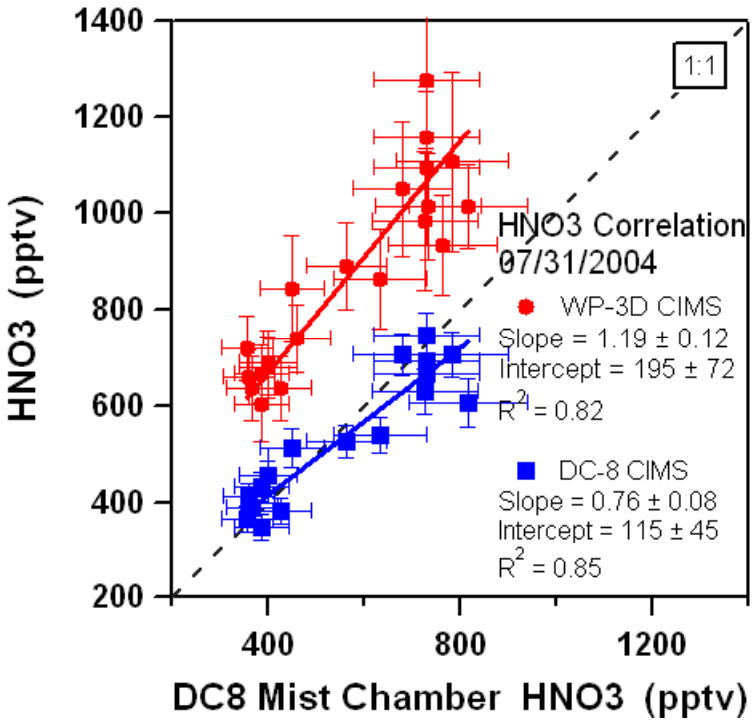
DC-8 Mist Chamber: 30-35%
DC-8 CIMS: ~52%
WP-3D: 1σ precision=20pptv Accuracy= 15%+50pptv

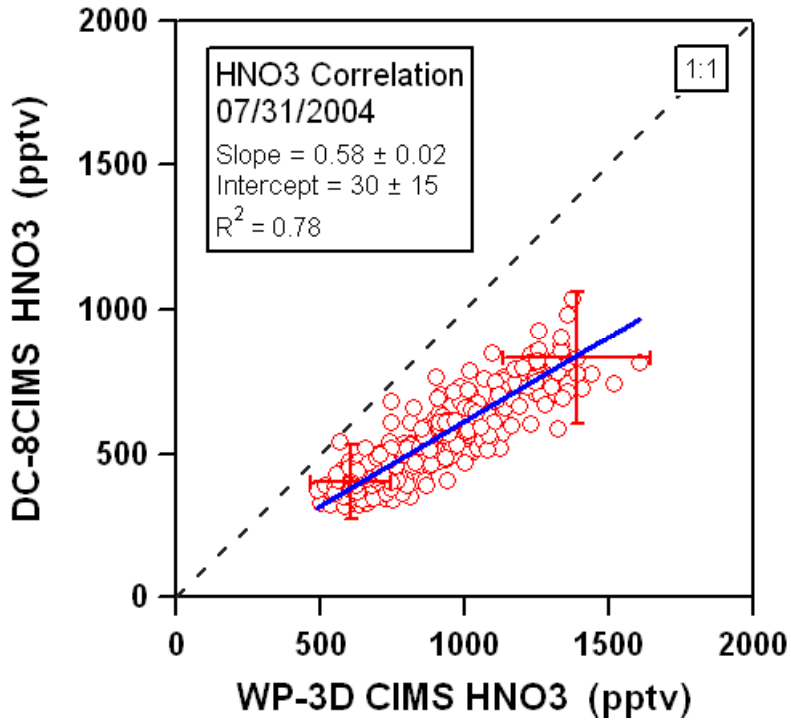

HNO3 (07/22/04)
DC-8 CIMS
DC8 MistC
WP-3D CIMS
Begin
14:45:50
End
15:32:14
HNO3 (pptv)
Altitude (km)
Time, GMT
14:50
15:00
15:10
15:20
15:30

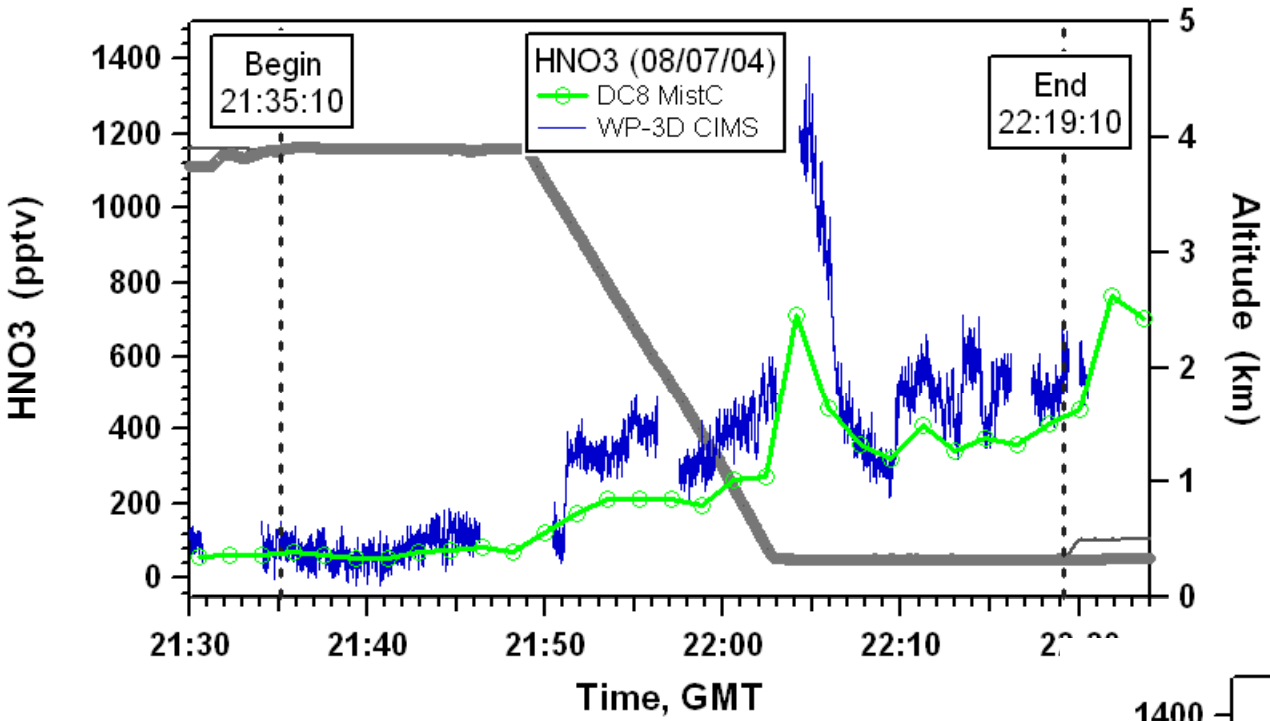

HNO3 Correlation
07/22/2004
WP-3D CIMS
Slope = 1.38 ± 0.07
Intercept = -298 ± 129
R2 = 0.94
DC-8 CIMS
Slope = 0.97 ± 0.05
Intercept = -28 ± 78
R2 = 0.97
1:1
HNO3 (pptv)
DC8 MistC HNO3 (pptv)

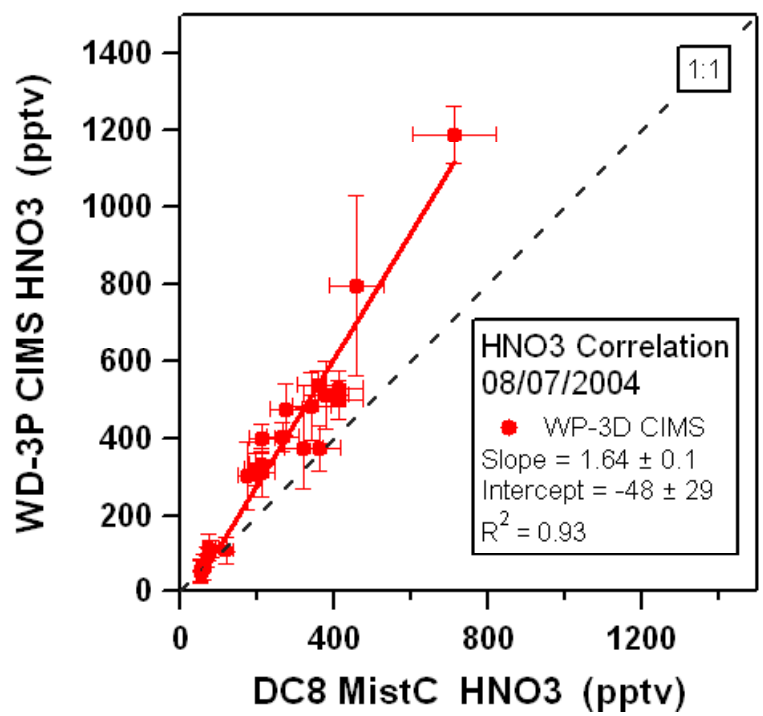

HNO3 Correlation
07/22/2004
Slope = 0.69 ± 0.01
Intercept = 128 ± 21
R2 = 0.95
1:1
DC-8 CIMS HNO3 (pptv)
WP-3D CIMS HNO3 (pptv)

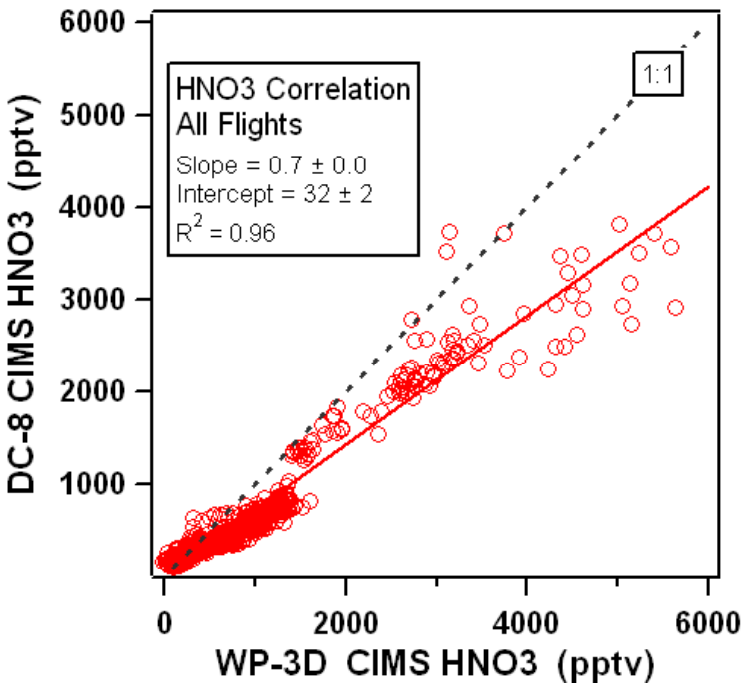

HNO3 (07/31/04)
DC-8 CIMS
DC8 MistC
WP-3D CIMS
Begin
22:52:50
End
23:32:10
HNO3 (pptv)
Altitude (km)
23:10
Time, GMT


1:1
HNO3 Correlation
07/31/2004
WP-3D CIMS
Slope = 1.19 ± 0.12
Intercept = 195 ± 72
R2 = 0.82
DC-8 CIMS
Slope = 0.76 ± 0.08
Intercept = 115 ± 45
R2 = 0.85
HNO3 (pptv)
DC8 Mist Chamber HNO3 (pptv)

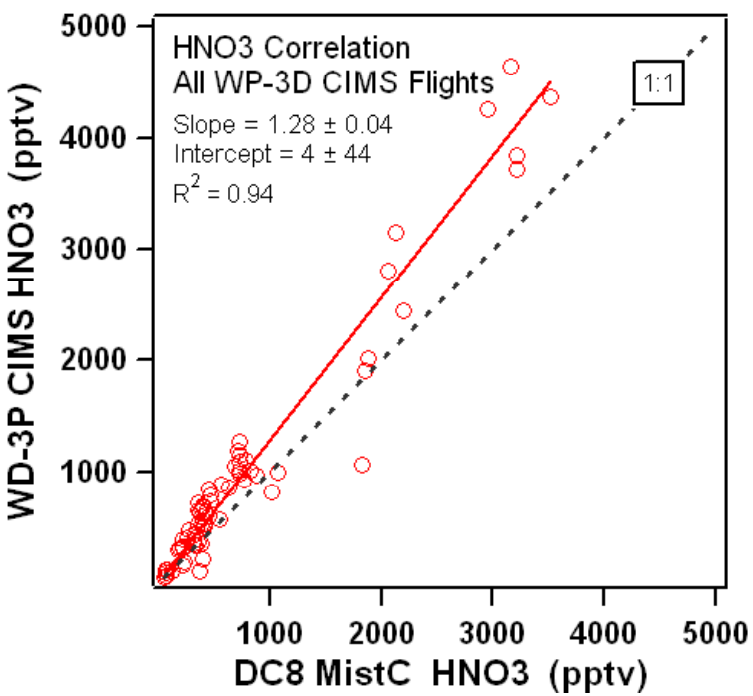

HNO3 Correlation
07/31/2004
Slope = 0.58 ± 0.02
Intercept = 30 ± 15
R2 = 0.78
1:1
DC-8CIMS HNO3 (pptv)
WP-3D CIMS HNO3 (pptv)


Begin
21:35:10
HNO3 (08/07/04)
DC8 MistC
WP-3D CIMS
End
22:19:10
HNO3 (pptv)
Altitude (km)
Time, GMT
21:30
21:40
21:50
22:00
22:10


1:1
HNO3 Correlation
08/07/2004
WP-3D CIMS
Slope = 1.64 ± 0.1
Intercept = -48 ± 29
R2 = 0.93
WD-3P CIMS HNO3 (pptv)
DC8 MistC HNO3 (pptv)



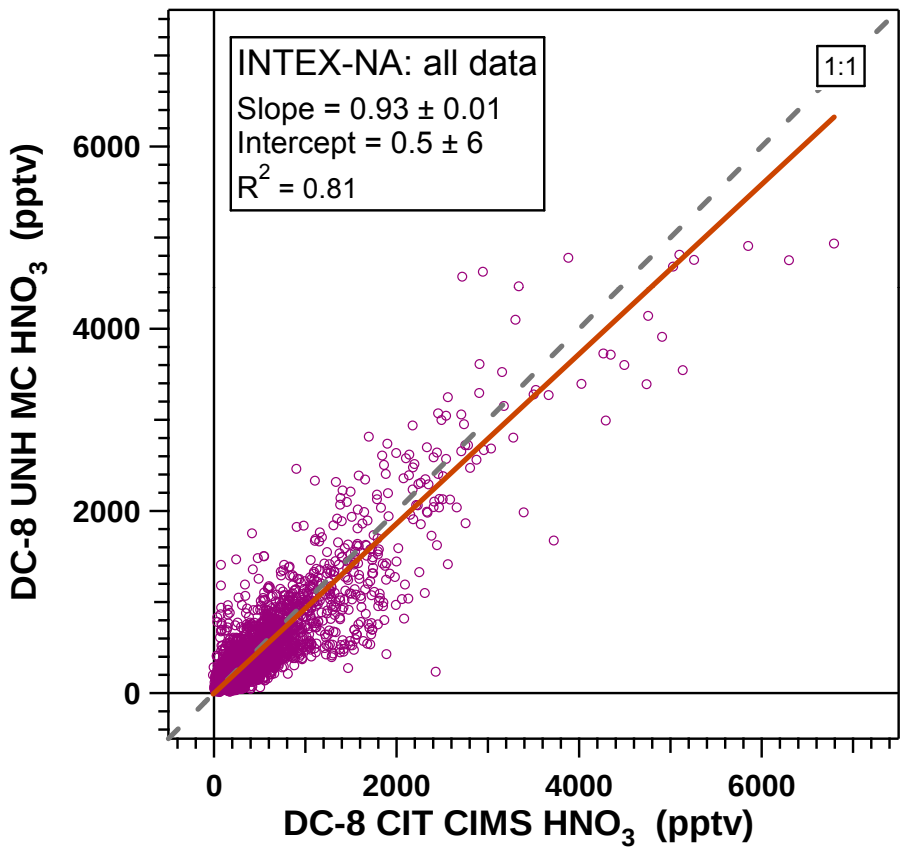
DC-8 CIMS	WP-3D CIMS
100	97
200	240
500	669
1000	1383
3000	4240
6000	8526

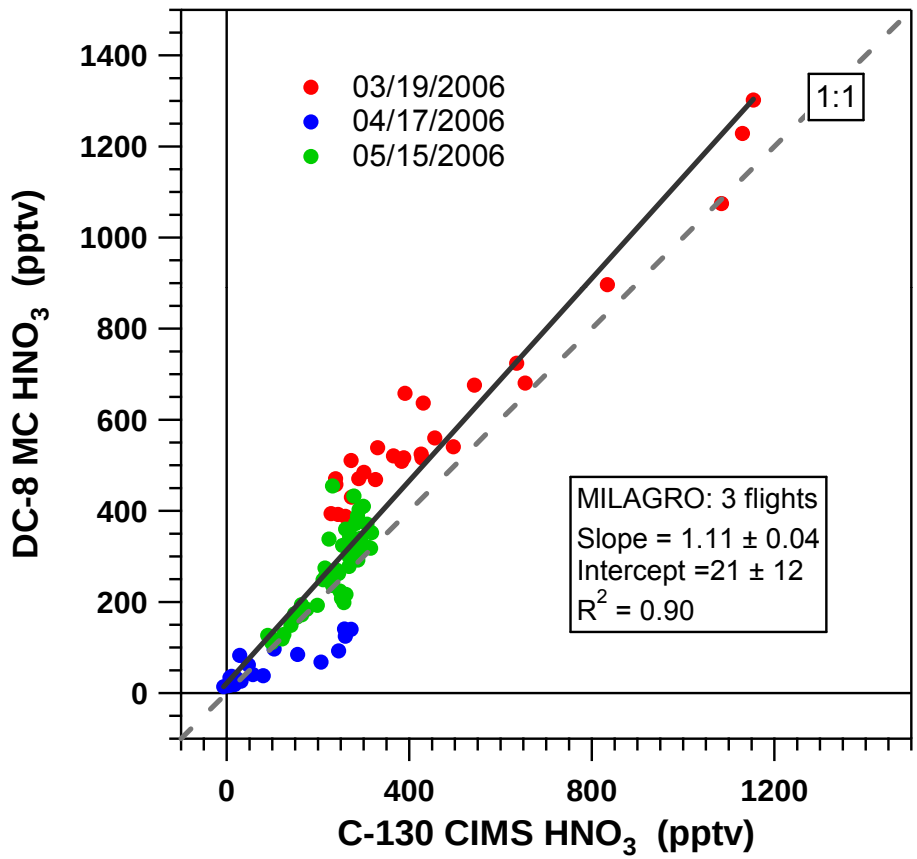


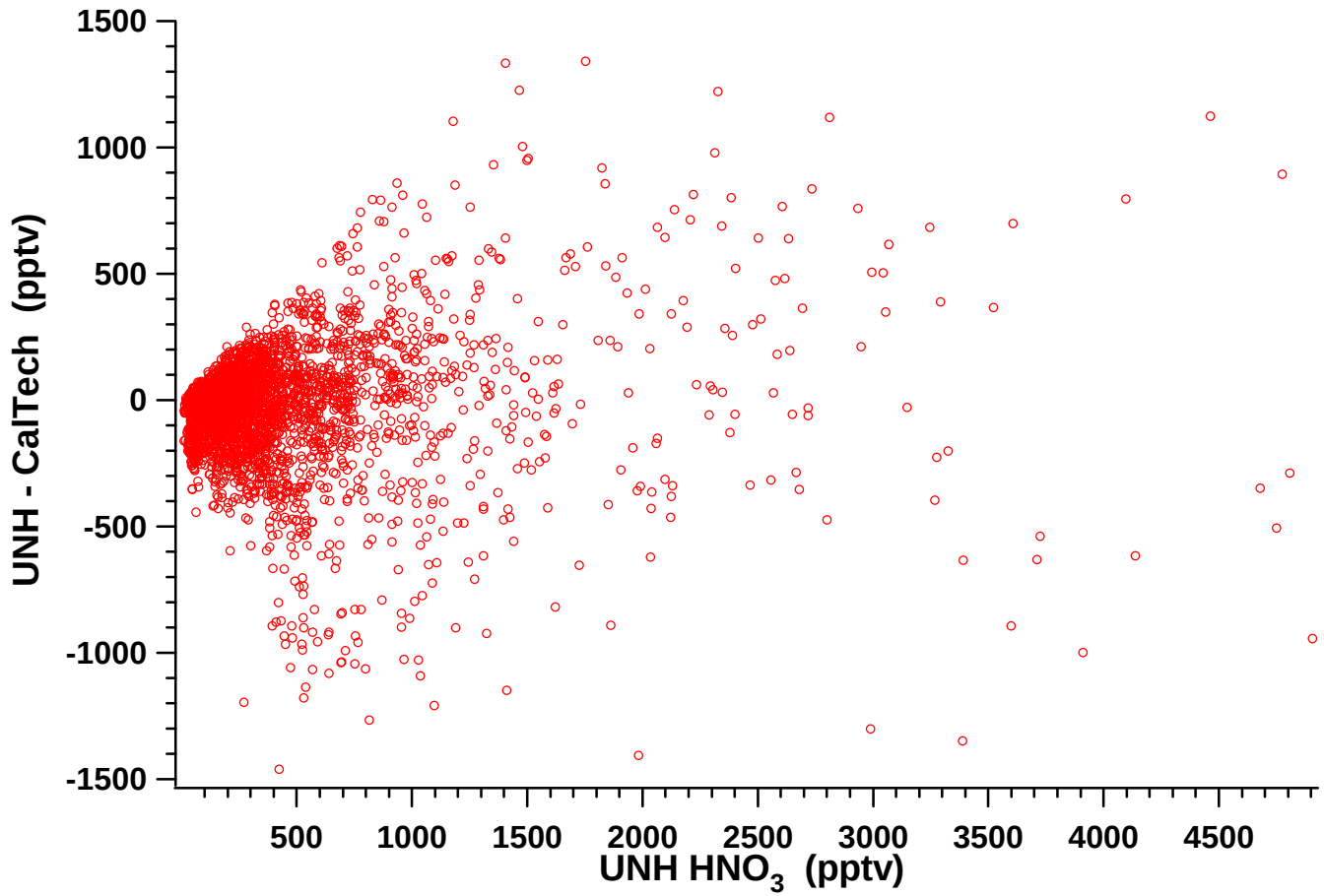
WP-3D CIMS	DC-8 MC
100	75
200	153
500	388
1000	778
2000	1559
5000	3903

HNO_3 Comparison: CIMS vs. Mist Chamber

all INTEX-A data





ΔHNO_3(UNH – CalTech) vs. UNH HNO_3

All INTEX-A data