

Table S3: Uncertainties of single MBEs

Relative uncertainties introduced by enhancement (dE/E) and pressure (dP/P) uncertainties are small compared to those introduced by temperature (dT/T), and wind speed (dU/U) uncertainties, which ultimately drive the calculation uncertainties (dER_{cal}/ER) for CO_2 , CH_4 and CO . The relative uncertainties introduced by the change of the convective boundary layer height between the beginning and the end of each experiment (dER_{exp}/ER) and dER_{cal}/ER contribute to the total uncertainty in emission rate of each flight (SI Eq. 3), which are given below as the relative standard deviation at the 95% confidence interval (RSD 95%) (also in Table 2 of the manuscript).

Dates (mm/dd/yy)	Enhancement Uncertainties			Measurement Uncertainties			Calculation Uncertainties			Experimental Uncertainties			Overall Uncertainties		
	$\delta E/E$ CO_2	$\delta E/E$ CH_4	$\delta E/E$ CO	$\delta P/P$	$\delta T/T$	$\delta U/U$	$\delta ER_{cal}/ER$ CO_2	$\delta ER_{cal}/ER$ CH_4	$\delta ER_{cal}/ER$ CO	$\delta ER_{exp}/ER$ CO_2	$\delta ER_{exp}/ER$ CH_4	$\delta ER_{exp}/ER$ CO	CO_2 (RSD 95%)	CH_4 (RSD 95%)	CO (RSD 95%)
11/13/14	0.16%	0.09%	0.39%	0.30%	3.7%	11%	12%	12%	23%	1.0%	9.1%	2.0%	23%	30%	24%
11/14/14	0.13%	0.19%	0.43%	0.47%	2.8%	19%	38%	38%	38%	41%	37%	22%	91%	82%	58%
11/17/14	0.14%	0.28%	0.45%	1.78%	4.3%	12%	12%	13%	25%	42%	75%	38%	88%	153%	81%
11/19/14	0.08%	0.15%	0.43%	1.92%	2.9%	12%	24%	24%	25%	10%	24%	27%	32%	53%	59%
11/20/14	0.15%	0.06%	0.49%	0.68%	3.7%	12%	25%	25%	25%	5.8%	25%	14%	28%	56%	37%
11/21/14	0.31%	0.28%	0.47%	0.36%	3.2%	14%	28%	28%	28%	-	-	-	29%	29%	29%
11/25/14	0.07%	0.05%	0.42%	0.70%	3.6%	12%	25%	25%	25%	0.5%	2.7%	4.2%	25%	26%	26%
12/01/14	0.09%	0.15%	0.46%	1.08%	2.8%	12%	24%	24%	24%	0.4%	0.9%	9.2%	25%	25%	31%
12/03/14	0.34%	0.52%	0.62%	0.20%	3.2%	16%	32%	32%	32%	21%	73%	3.0%	53%	150%	33%