Supplemental material to:

*Sniffle*: a step forward to measure *in situ* CO2 fluxes with the floating chamber technique

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Table S1: Data set for each individual flux calculation. Meteorological conditions observed visually (slicks and rain), FCO2: CO2 flux across the air-water interface; k660: gas transfer velocity normalized for the Schmidt number of 660; U10: wind speed at 10 m; water temperature at 1 m depth; aqueous *p*CO2;and R2: regression coefficient (R2) of the measured slope (dpCO2/dt) inside the chamber. Air *p*CO2 was 401.6 ± 7.7 µatm (n = 60).

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date(Month dd, 2016) | Time[UTC] | Meteorological observations | FCO2·10−3[mmol m−2 min−1] | k660[cm h−1] | U10[m s−1] | Water temperature[°C] | *Aqueous p*CO2[µatm] | R2 |
| July 18  | 08:53-09:06 |  | 29.1 | 12.5 | 4.0 | 18.8 | 849.1 | 0.996 |
|  | 09:51-10:04 |  | 24.5 | 10.9 | 4.2 | 19.0 | 814.1 | 0.994 |
|  | 10:09-10:22 |  | 16.8 | 7.4 | 5.0 | 19.1 | 814.1 | 0.990 |
|  | 11:07-11:20 |  | 21.8 | 8.8 | 5.5 | 19.3 | 848.4 | 0.996 |
|  | 11:25-11:38 | Slick | 14.1 | 5.7 | 5.1 | 19.2 | 848.4 | 0.997 |
|  | 12:23-12:32 |  | 23.4 | 9.5 | 4.2 | 19.2 | 848.4 | 0.996 |
| July 19  | 09:27-09:40 |  | 29.6 | 12.9 | 1.9 | 19.7 | 839.3 | 0.998 |
|  | 09:45-09:58 |  | 16.3 | 7.1 | 2.3 | 19.4 | 839.3 | 0.997 |
|  | 10:43-10:56 |  | 24.0 | 10.4 | 2.9 | 20.0 | 828.9 | 0.998 |
|  | 11:02-11:14 |  | 15.3 | 6.6 | 3.4 | 19.9 | 828.9 | 0.996 |
|  | 11:59-12:12 |  | 24.1 | 10.7 | 4.0 | 19.6 | 818.2 | 0.999 |
|  | 12:17-12:30 |  | 15.2 | 6.8 | 3.0 | 19.6 | 818.2 | 0.996 |
|  | 13:15-13:28 |  | 23.2 | 10.2 | 2.4 | 20.2 | 818.2 | 0.998 |
| August 1  | 09:07-09:20 | Light rainfall | 38.0 | 12.5 | 4.5 | 21.5 | 936.2 | 0.955 |
|  | 09:25-09:38 | Light rainfall | 33.2 | 10.9 | 4.8 | 21.4 | 936.2 | 0.973 |
|  | 10:23-10:36 | Slick/thick foam  | 10.5 | 3.3 | 6.2 | 21.4 | 952.3 | 0.985 |
|  | 10:41-10:54 | Slick | 13.2 | 4.2 | 5.9 | 21.4 | 952.3 | 0.991 |
|  | 11:39-11:52 |  | 20.5 | 6.7 | 1.6 | 21.4 | 930.5 | 0.999 |
|  | 11:57-12:02 |  | 31.1 | 10.1 | 1.9 | 21.4 | 930.5 | 0.997 |