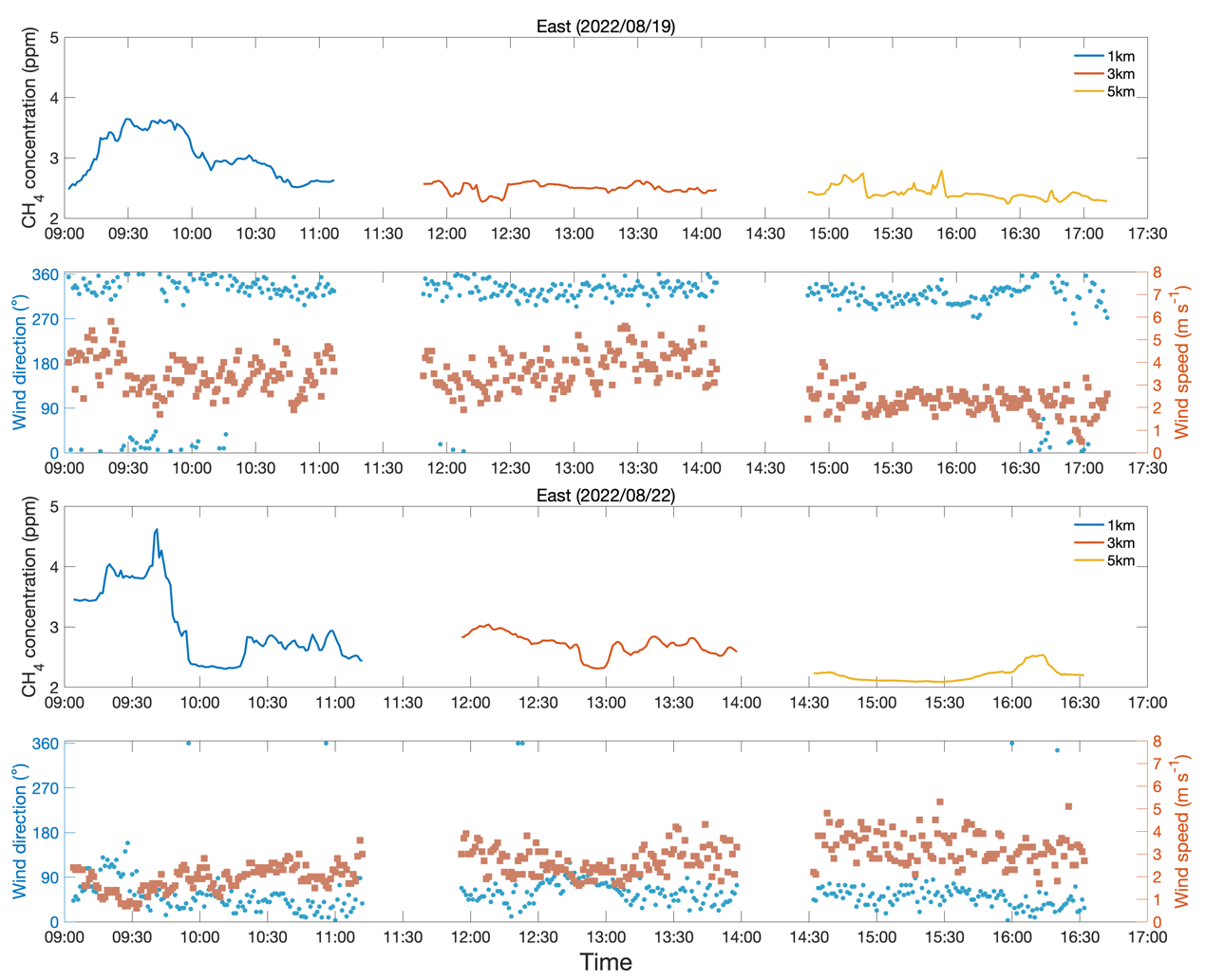
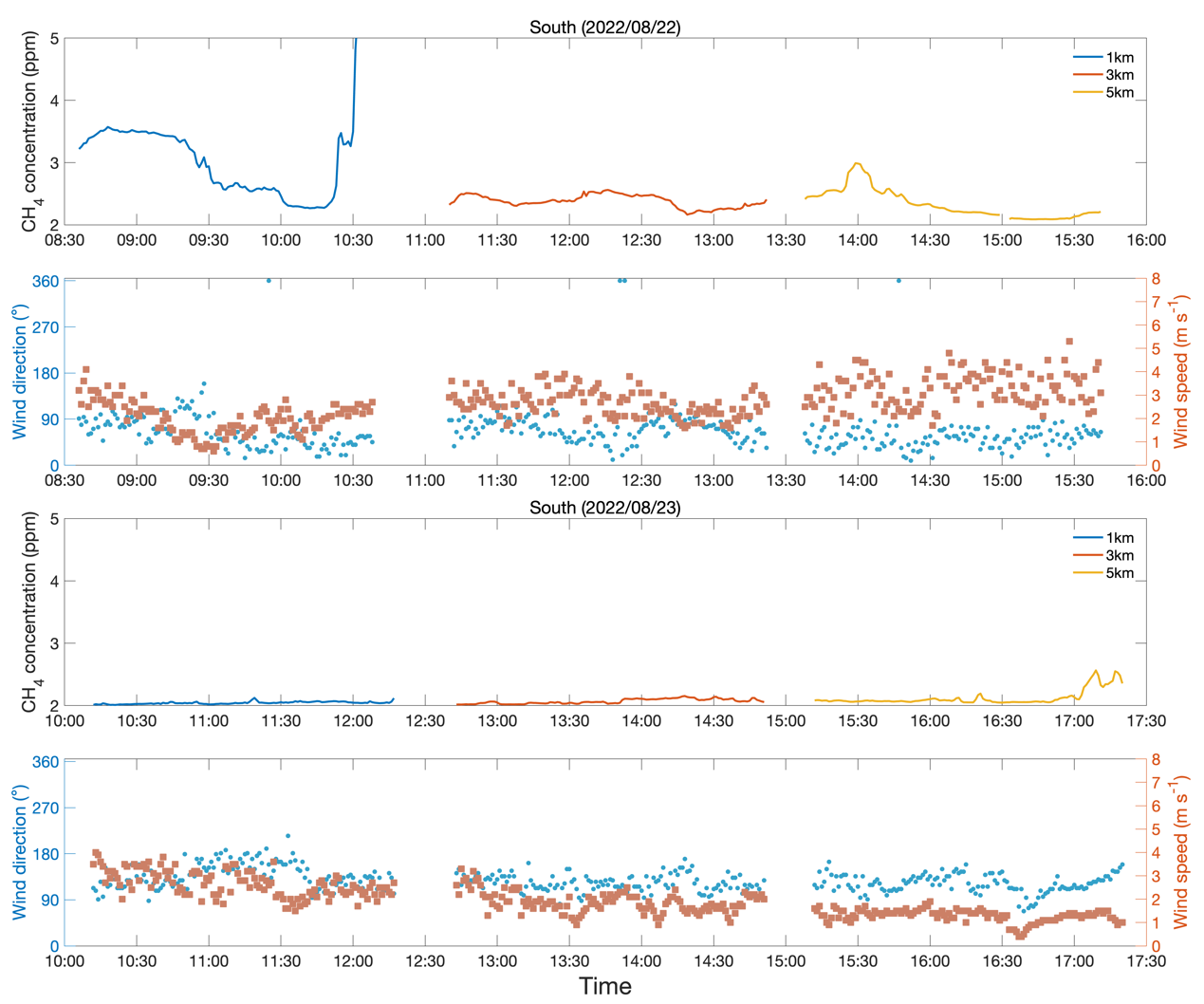
**Table S1. Detailed Information Summarizing the Dates, Times, and Locations Observed in the Field**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Direction of measured site | Sample period (min) | | |
| 1 km | 3 km | 5 km |
| 10 August 2022 | North | 88 | 35 | 47 |
| 12 August 2022 | North | 78 | 66 | 61 |
| 13 August 2022 | North | 168 | 181 | 178 |
| 14 August 2022 | North | 125 | 128 | 122 |
| 15 August 2022 | North | 121 | 122 | 119 |
| 17 August 2022 | North, West | 122, 124 | 119, 120 | 120, 117 |
| 18 August 2022 | North, West | 143, 119 | 135, 118 | 125, 120 |
| 19 August 2022 | East | 126 | 139 | 140 |
| 21 August 2022 | North | 140 | 127 | 125 |
| 22 August 2022 | East, South | 129, 123 | 124, 133 | 121, 124 |
| 23 August 2022 | South | 126 | 129 | 129 |



**Figure S1. Time series of CH4 concentrations (ppm), wind speed (m s-1) and wind direction (o) measured at 1km (blue line), 3km (red line) and 5km (yellow line) located east of CM-A on two different days.**

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**Figure S2. Time series of CH4 concentrations (ppm), wind speed (m s-1) and wind direction (o) measured at 1km (blue line), 3km (red line) and 5km (yellow line) located south of CM-A on two different days.**