

# Measurement report: Multi-platform greenhouse gas monitoring of a major petrochemical industrial complex in South Korea

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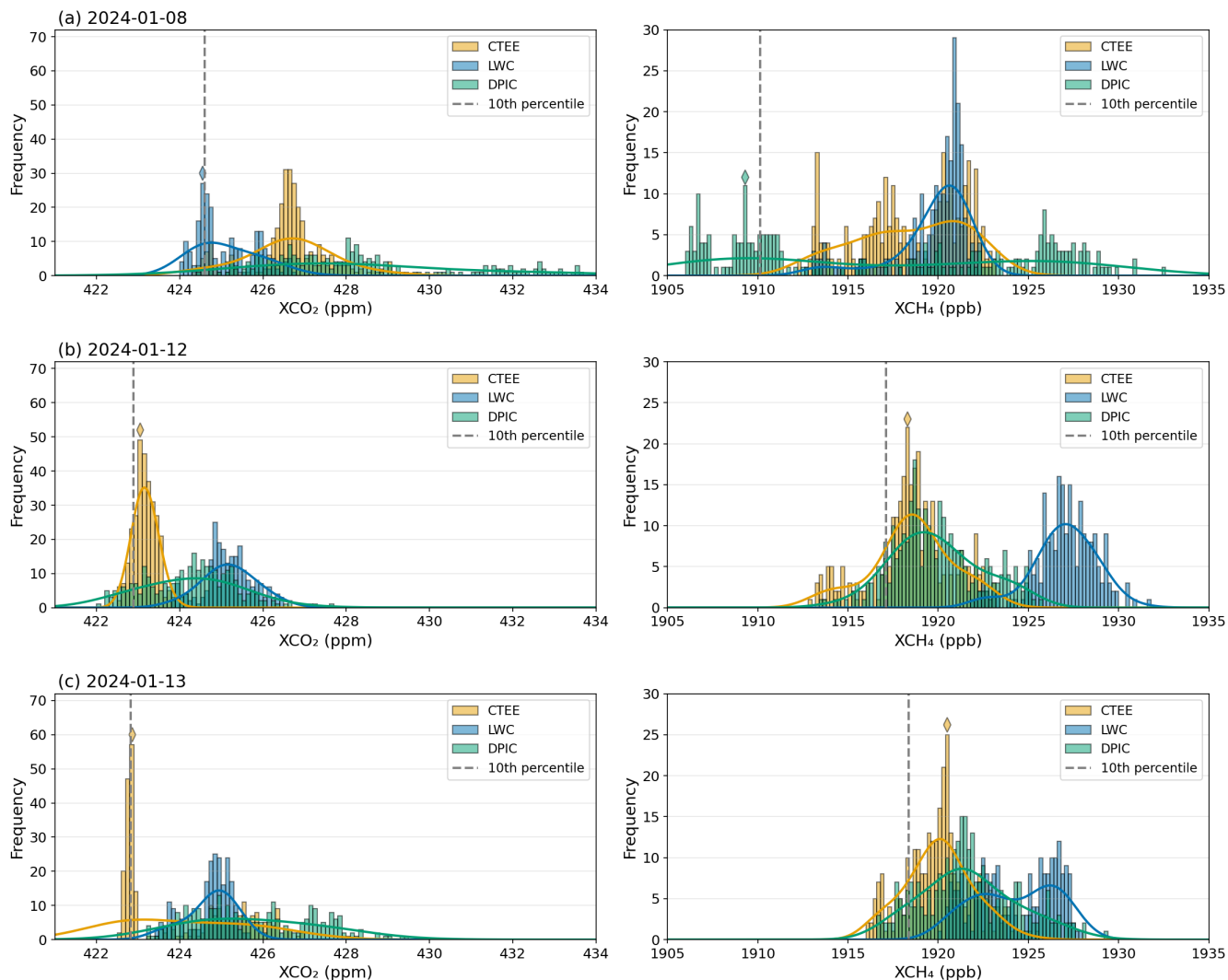
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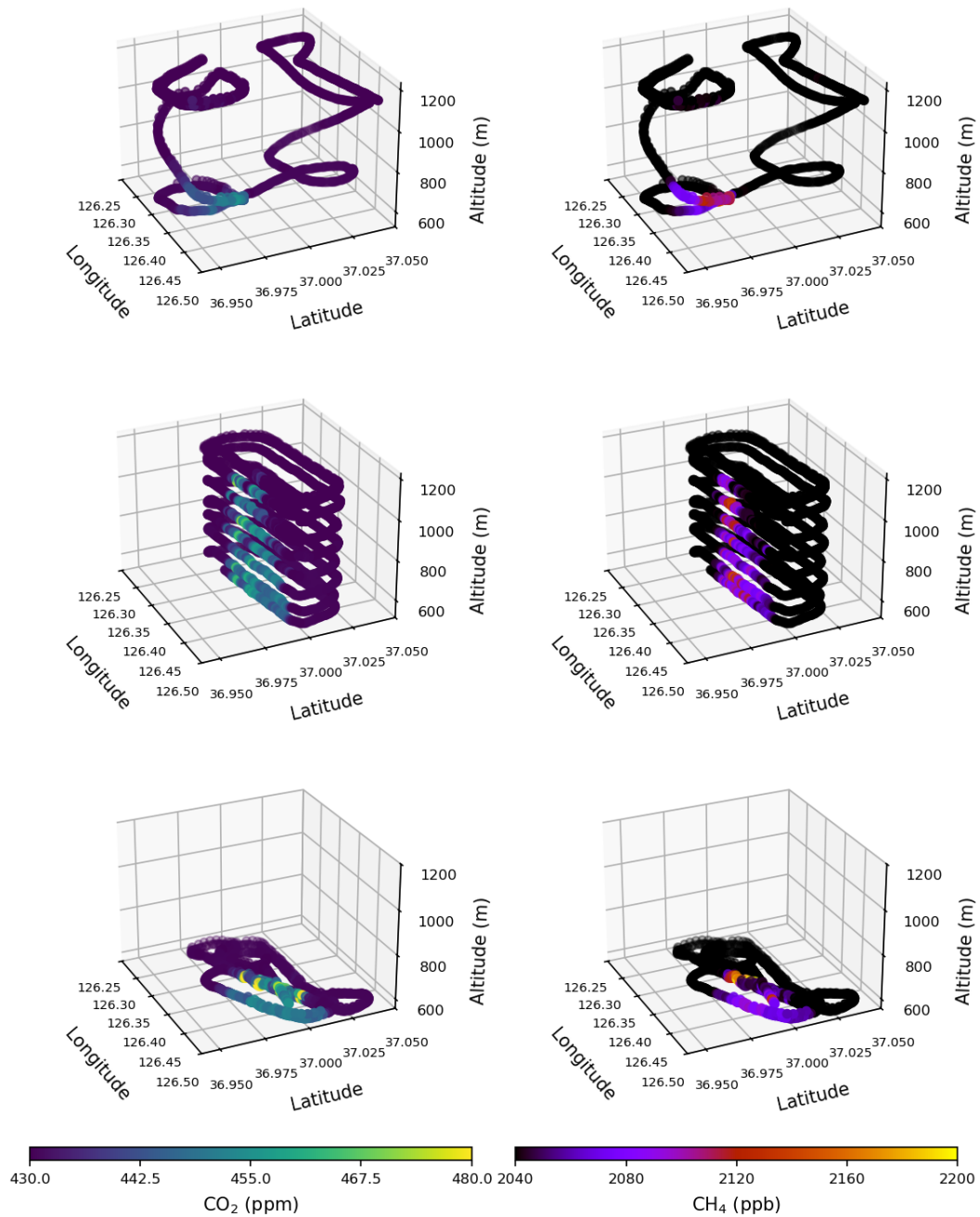
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**Table S1.** SNU mobile GHG measurement platform campaign observation dates and time schedule.

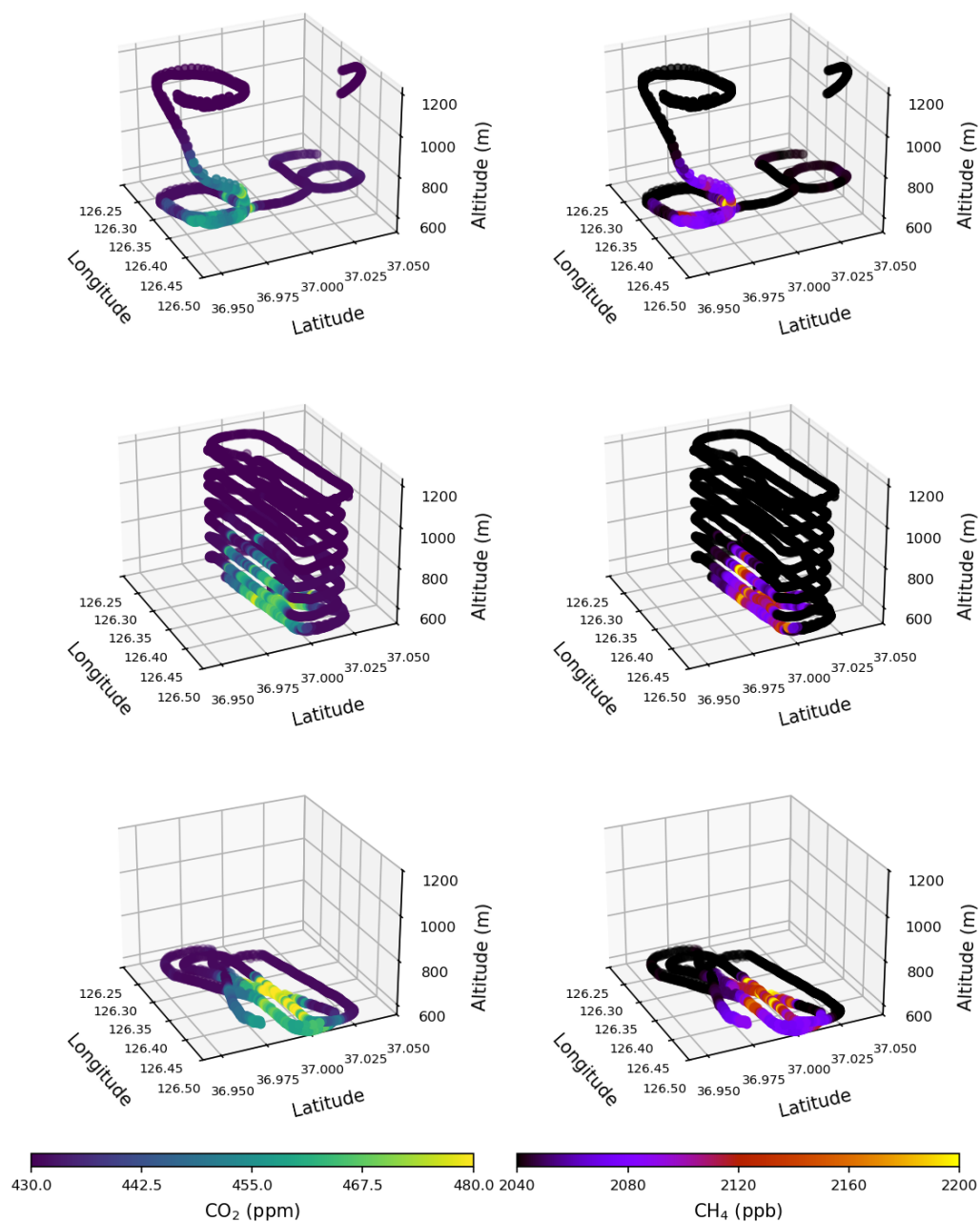
| Date<br>(YYYY-MM-DD) | Observation schedule<br>(Local Time; LT) |
|----------------------|------------------------------------------|
| 2024-01-16           | 12:00 – 16:00                            |
| 2024-01-07           | 12:00 – 15:00                            |
| 2024-01-08           | 12:00 – 17:00                            |
| 2024-01-10           | 12:00 – 15:00                            |
| 2024-01-11           | 18:00 – 20:00                            |
| 2024-01-12           | 13:00 – 15:00                            |
| 2024-01-13           | 12:00 – 14:00                            |



**Figure S1.** Distribution of  $\text{XCO}_2$  and  $\text{XCH}_4$  measurements from the three EM27/SUN observation sites DPIC (green), CTEE (orange), and LWC (blue) made on (a) January 8, (b) January 12, and (c) January 13. The mode of the distribution at the site exhibiting the lowest overall concentration distribution for each day is indicated by a diamond marker. The 10<sup>th</sup> percentile of daily measurements across all three observation sites is indicated by a grey dashed line.



**Figure S2.** Aircraft observations of CO<sub>2</sub> (left) and CH<sub>4</sub> (right) on January 6, 2024 divided into sections of varying flight observation paths.



**Figure S3.** Aircraft observations of CO<sub>2</sub> (left) and CH<sub>4</sub> (right) on January 13, 2024 divided into sections of varying flight observation paths.