

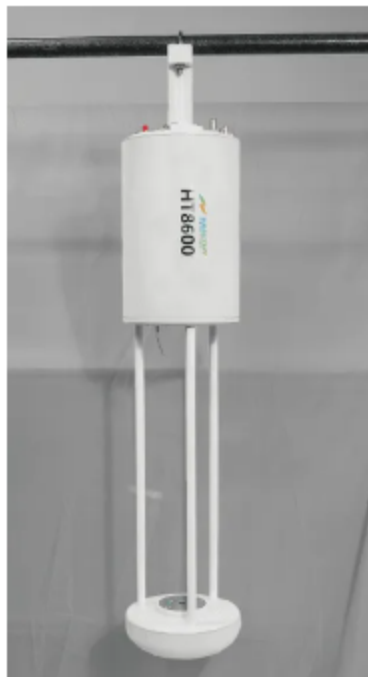
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HT8600: A laser-based open-path CH₄ analyzer

Parameters:

- Weight: <15kg
- Dimensions: 1024mm×Ø196mm
- 17m effective optical path
- Utilizes an ICL to probe the MIR transition of CH₄ at ~3221.1 nm
- Low temperature correction [1]
- Capability to measure H₂O and CH₄ simultaneously

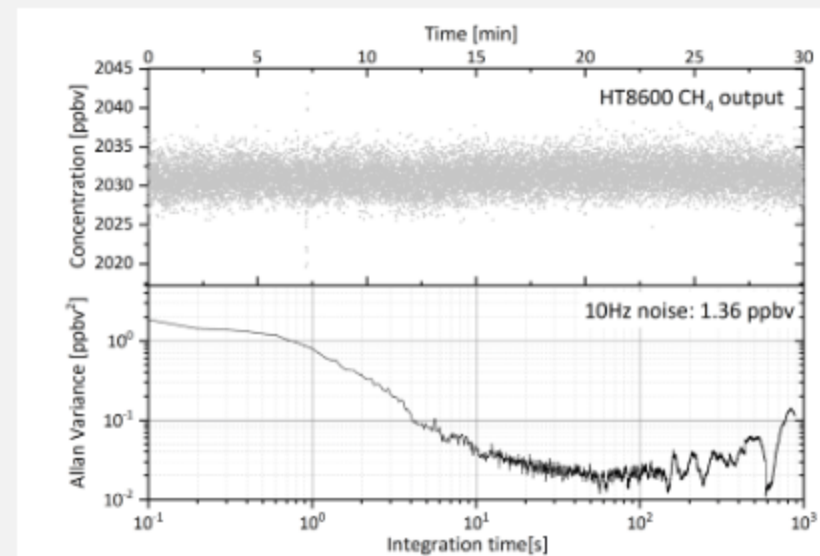
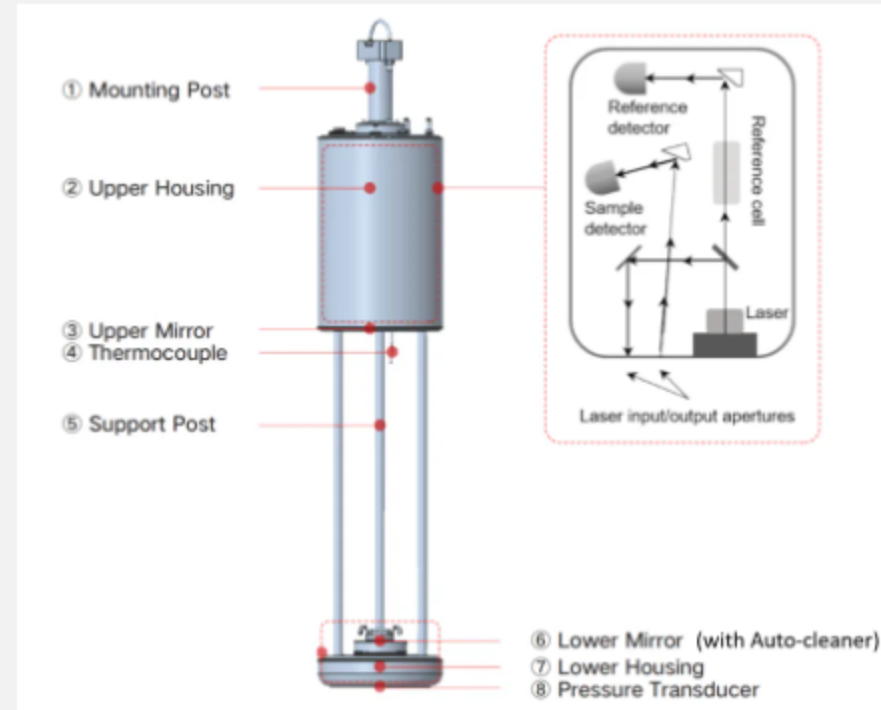


H₂O absorption at 3222.7 nm
CH₄ absorption at 3221.1 nm



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Analyzer performance



Measurement range	0.1-15 ppmv
Sampling rate	10Hz

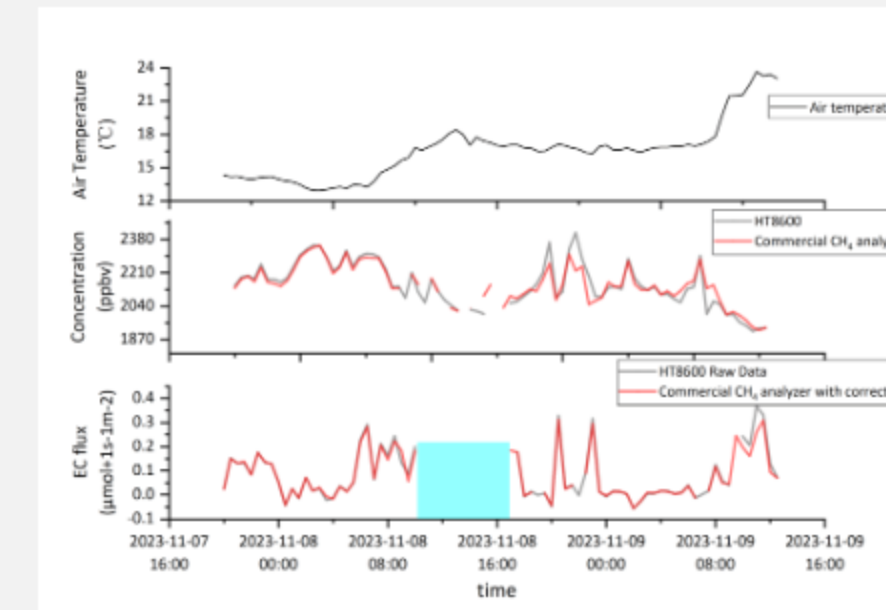
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Eddy covariance CH₄ fluxes

Comparison:

1. raw flux from HT8600 measurement and 2. corrected flux from a commercial open-path methane analyzer

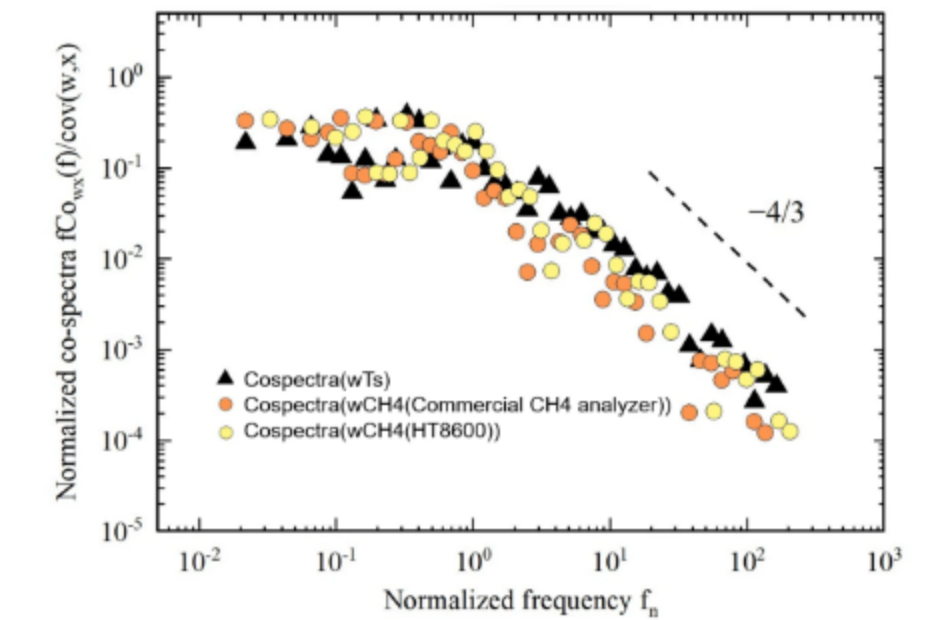
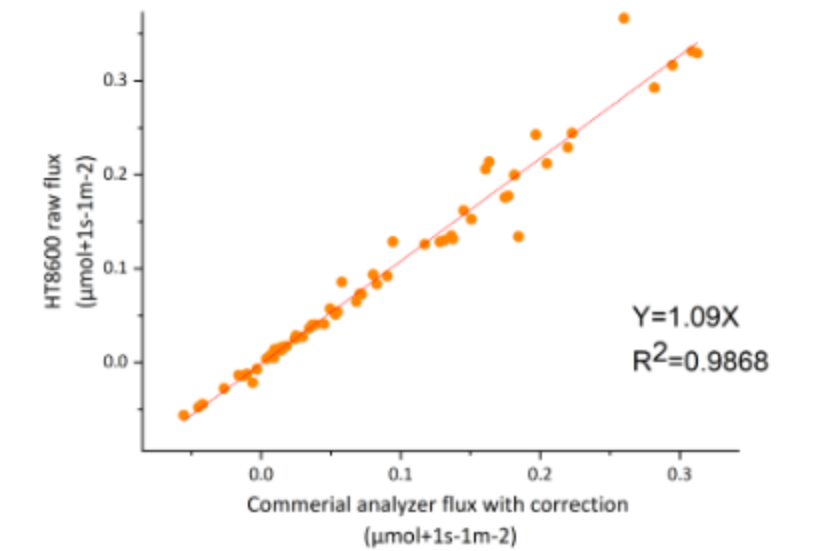
HT8600 requires a low temperature correction factor as WPL and the spectroscopic corrections compensate each other [1].



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Summary and Future works

Flux:



Future works:

1. We will explore the analyzer's capability to simultaneously sense both H₂O and CH₄, enhancing its

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