

Interactive comment on “A compact QCL spectrometer for mobile, high-precision methane sensing aboard drones” by Béla Tuzson et al.

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Hi, First of all, thank you for your article which I found very interesting and of great quality. I think that some details and figures about the acquired spectra would be very interesting. It seems that the experimental spectra showed in figure 2 corresponds to the region of spectral interest but was it obtained using your instrument ?

Did you scan the same spectral range during during the UAV flights ? In the presented spectra of figure 2, it seems that you manage to fit the N_2O , CH_4 and H_2O absorption lines quite nicely, so why don't you also present N_2O and H_2O concentration in your results ? Since the two Picarro models (G1301,G2401) used in your field experiment are able to analyse H_2O , I think that it would be very interesting to share H_2O

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concentration results, or even a comparison with Picarro sensors.

A 1Hz raw spectra obtained during a flight would also be interesting to show as you mention baseline variations and dynamic fringes structures

As mentioned line 209, prior to the flight, an etalon spectrum is recorded and spectra fit is set up; is it part of your standard operation protocol ? Do you always use this procedure in order to compensate an potential drift from the QCL over time ?

Thanks again for sharing this work

Best regards,

N.Dumelié

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