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# Development of a new methane tracer: kinetic isotope effect of $^{13}CH_3D$ + OH from 278 to 313 K

**L. M. T. Joelsson et al.**

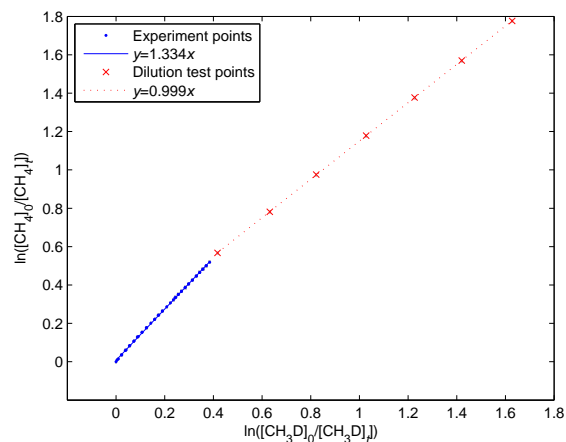*Correspondence to:* M. S. Johnson (msj@kiku.dk)

Figure S1: A typical experiment plot (Experiment 5). Experimental data are shown using points. A linear fit of the experimental points is shown using a solid line and the subsequent dilution test points are represented by 'x' symbols. A linear fit of the dilution test fit are represented by a dotted line, uncertainties for each point are represented by grey areas.
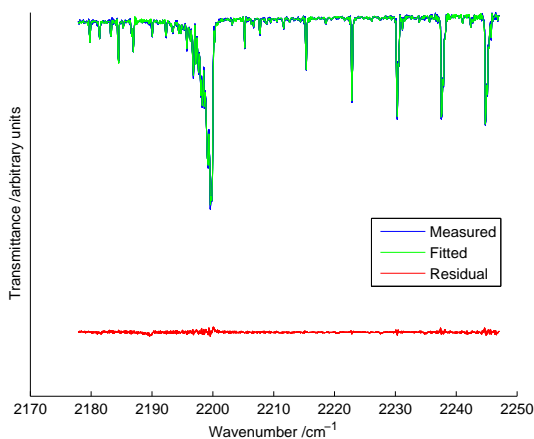


Figure S2: A typical spectral fit in the region where [CH$_3$D] is obtained (Experiment 5). Experimental data are shown using a blue line, fitted spectra are shown using a green line, and the residual is shown using a red line.

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Figure S3: A typical spectral fit in the region where [CH$_4$] is obtained (Experiment 5). Experimental data are shown using a blue line, fitted spectra are shown using a green line, and the residual is shown using a red line.
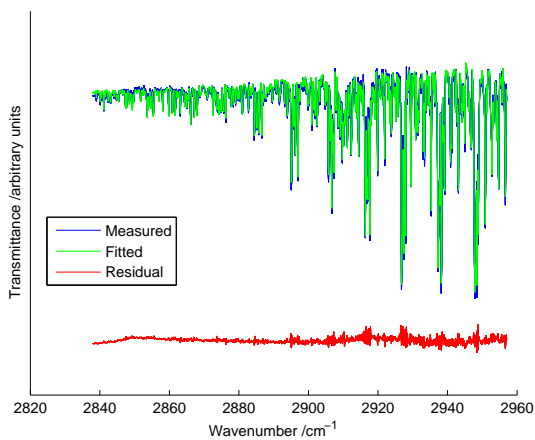


Figure S4: A typical spectral fit in the region where [$^{13}$CH$_3$D] is obtained (Experiment 10). Experimental data are shown using a blue line, fitted spectra are shown using a 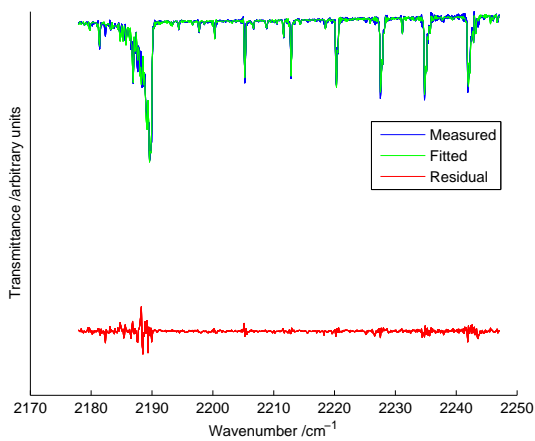green line, and the residual is shown using a red line.