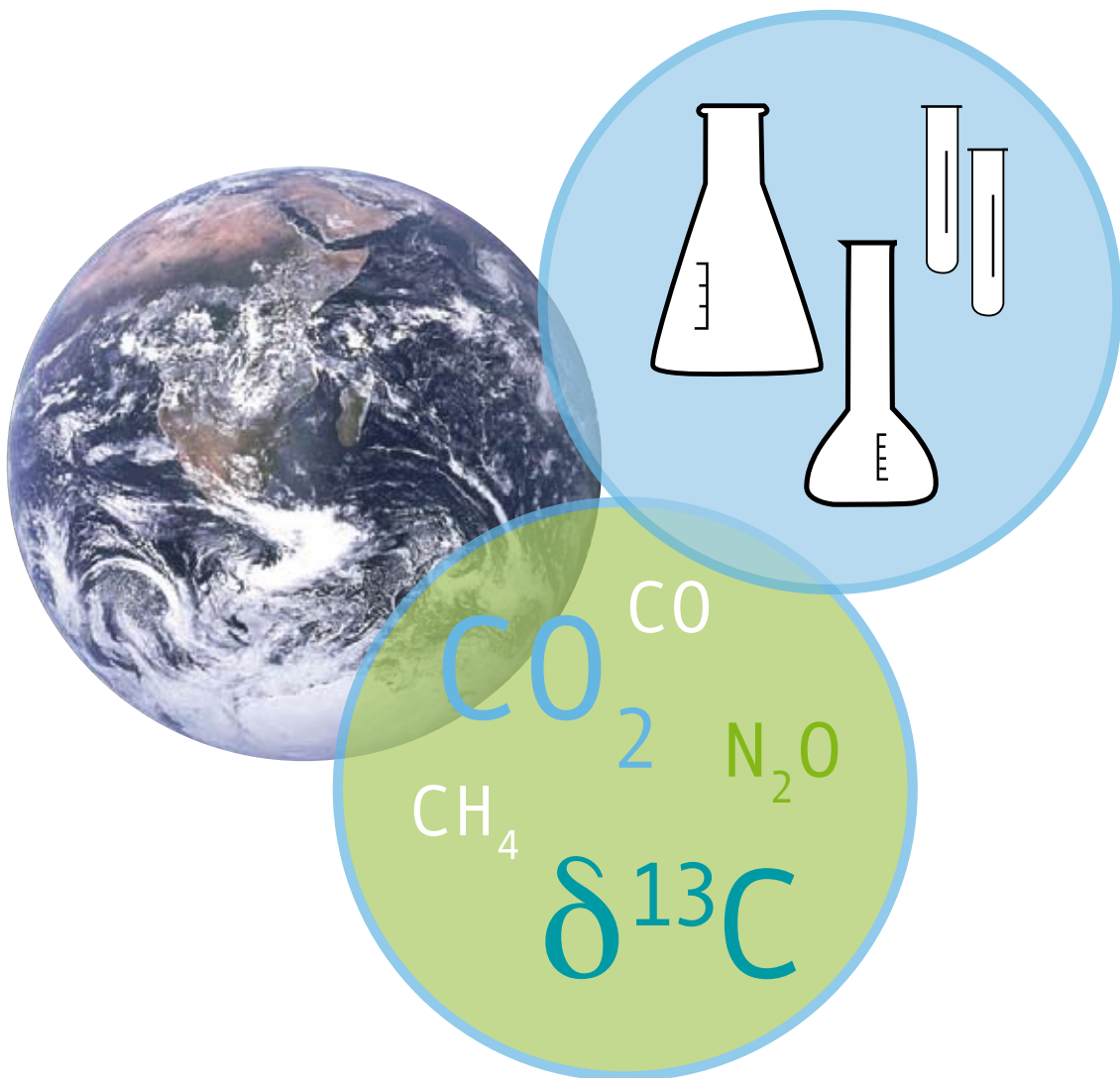
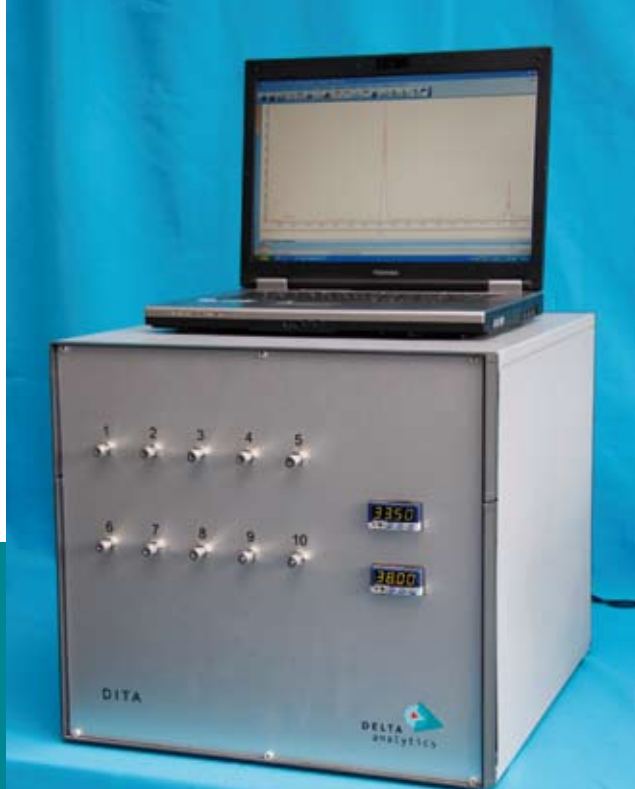


high finesse instruments for measurements of isotope ratios  
and trace gases in environmental air



Novel outdoor instrument to monitor simultaneously all trace gas components and isotope ratios of environmental air in one measurement. Make use of 10 inlet ports for multi component calibration. High sensitivity in the ppm to ppb range.



## DITA (Delta Isotope and Trace Gas Analyser)

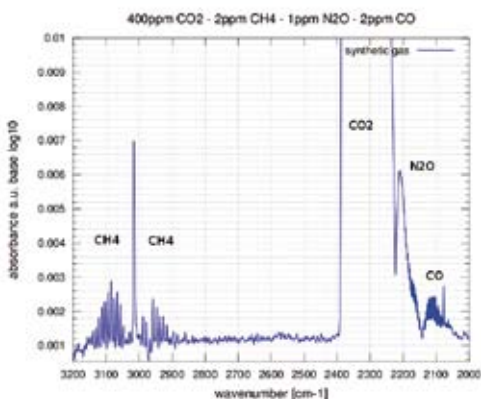
### Hardware

FTIR spectrometer Alpha connected to a „White“-type multipass cell with 5 m optical path. Active temperature control to 0.01 °C. Gas flow management is maintained by the use of stainless steel tubes and Vici valves, comparable to mass spectroscopy standards. This includes air drying by Nafion tube and Magnesium perchlorate filter. Inline pump and rugged design for outdoor use.

### Software

OPUS software for data acquisition and built in VB-scripts for gas flow control. Choose from a multivariate analysis or use the export functions to analyse your spectral data in your favourite software.

Example of a synthetic gas measurement containing CO<sub>2</sub>, CO, CH<sub>4</sub> and N<sub>2</sub>O in the lab of Delta Analytics.



### Specs

mixing ratios precision

CO<sub>2</sub>: 1 ppm (μ mol/mol) for 400 ppm in gas

CH<sub>4</sub>: <0.01 ppm (μ mol/mol) for 2 ppm in gas

N<sub>2</sub>O: <0.01 ppm (μ mol/mol) for 1 ppm in gas

CO: <0.01 ppm (μ mol/mol) for 2 ppm in gas

δ<sup>13</sup>C: 0.5 per mil (‰) after SVD analysis

### Test conditions

10 times 60 sec measurements, resolution 2 cm<sup>-1</sup>, (single channel ref. 60 sec) in 1 σ standard deviation