

DLR Falcon Tedlar bag sampling (CH₄ and Delta C 13)

General information

Dataset name: DLR Falcon Tedlar bag sampling (CH₄ and Delta C 13)
Created on: 2017-03-30

Contact(s)

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Period

Date begin (yyyy-mm-jj): 2016-06-29
Date end (yyyy-mm-jj): 2016-07-14

Project(s)

DACCIWA > WP3 - Atmospheric Chemistry

Data description

Abstract

Methane and Delta C 13 data from the DLR Falcon during the DACCIWA campaign. The data was sampled using Tedlar bags.

The methane mole fraction was measured using a Picarro 1301 cavity ringdown spectrometer.

Methane isotopic composition was measured using an Isoprime mass spectrometer and Trace Gas preparation System.

Instrument information

Sensor

Instrument type: Chemical Meters/Analyzers
Reference: Fisher, R., Lowry, D., Wilkin, O., Sriskantharajah, S. and Nisbet, E. G. (2006), High-precision, automated stable isotope analysis of atmospheric methane and carbon dioxide using continuous-flow isotope-ratio mass spectrometry. *Rapid Commun. Mass Spectrom.*, 20: 200-208. doi:10.1002/rcm.2300

Sensor resolution

Observation frequency: 3 - 7 samples per flight

Geographic information

DLR Falcon

Location name: DLR Falcon
Platform type: DLR-FALCON 20
West bounding coordinate (°): -4.7
East bounding coordinate (°): 2.7
North bounding coordinate (°): 10.4
South bounding coordinate (°): 3.7
Altitude max: 12900

Measured parameters

Methane

Parameter keyword: Atmosphere > Atmospheric Chemistry > Carbon and Hydrocarbon Compounds > Methane
Unit: ppmv
Acquisition methodology and quality: The data was sampled using Tedlar bags.
Methane was measured using a Picarro 1301 cavity ringdown spectrometer.

Isotope ratio Delta C 13

Parameter name: isotope ratio Delta C 13
Parameter keyword: Atmosphere > Atmospheric Chemistry
Unit: permillage - ?
Acquisition methodology and quality: The data was sampled using Tedlar bags.
Methane isotopic composition was measured using an Isoprime mass spectrometer and Trace Gas preparation System.

Data use information

Use constraints: The research leading to these results has received funding from the European Union Seventh Framework Programme FP7/2007-2013) under grant agreement n° 603502
Data policy: AMMA data policy
Database: Dacciwa database
Original data format(s): NASA Ames 1001