

# ATR GAS CO<sub>2</sub>, CH<sub>4</sub>, CO

## General information

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Dataset name: ATR GAS CO<sub>2</sub>, CH<sub>4</sub>, CO  
Created on: 2017-10-12

### Contact(s)

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### Period

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Date begin (yyyy-mm-jj): 2016-06-29  
Date end (yyyy-mm-jj): 2017-07-16

### Project(s)

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DACCIWA > WP3 - Atmospheric Chemistry

## Data description

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### Abstract

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High precision measurement of CO<sub>2</sub>, CH<sub>4</sub> and CO mole fractions in dry air.

### Observing strategy

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Continuous measurements, processed in the ICOS database.

### References

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Hazan et al., Automatic processing of atmospheric CO<sub>2</sub> and CH<sub>4</sub> mole fractions at the ICOS Atmosphere Thematic Centre. Atmos. Meas. Tech., 9, 4719-4736, 2016.

## Instrument information

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### Sensor

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Instrument type: CO<sub>2</sub> ANALYZERS  
Model: G2401m  
Instrument features / Calibration: Serial number CFKBDS-2132 / ICOS ID 305

## Sensor resolution

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Observation frequency:	2-3 sec
Horizontal coverage:	in-situ
Vertical coverage:	in-situ

## Geographic information

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### Zones urbaines d'Afrique de l'Ouest et alentours

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Location name:	Zones urbaines d'Afrique de l'Ouest et alentours
Platform type:	ATR-42
West bounding coordinate (°):	-4.263
East bounding coordinate (°):	4.0141
North bounding coordinate (°):	10.8334
South bounding coordinate (°):	3.2298
Altitude max:	8084.17

## Measured parameters

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### Carbon Dioxide

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Parameter keyword:	Atmosphere > Atmospheric Chemistry > Carbon and Hydrocarbon Compounds > Carbon Dioxide
Unit:	ppmv
Date begin (yyyy-mm-jj):	2016-06-29
Date end (yyyy-mm-jj):	2017-07-16

### Methane

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Parameter keyword:	Atmosphere > Atmospheric Chemistry > Carbon and Hydrocarbon Compounds > Methane
Unit:	ppbv - ppbv
Date begin (yyyy-mm-jj):	2016-06-29
Date end (yyyy-mm-jj):	2016-07-16

### Carbon Monoxide

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Parameter keyword:	Atmosphere > Atmospheric Chemistry > Carbon and Hydrocarbon Compounds > Carbon Monoxide
Unit:	part per billion - ppb
Date begin (yyyy-mm-jj):	2016-06-29
Date end (yyyy-mm-jj):	2016-07-16

## Derived parameter

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### Water Vapor

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Parameter keyword:	Atmosphere > Atmospheric Water Vapor > Water Vapor Indicators > Water Vapor
Unit:	percent - %
Date begin (yyyy-mm-jj):	2016-06-29
Date end (yyyy-mm-jj):	2016-07-16

## Data use information

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Use constraints: Users envisaging to publish a paper should consider at an early stage to inform the instrument PIs and if the data are essential to the work to offer co-authorship to the instrument PIs.

Warning: the first version of the dataset (v01) is still under investigation. The measurement of a quality control gas (target) before and after each flight shows biases of -30ppb for CH<sub>4</sub> and -34ppb for CO from 07/07 to 14/07; and +0.8ppm for on 16/07. This bias seems to be related to a problem to the target gas injection without affecting the ambient air measurement. To be confirmed.

Data policy: DACCIWA data policy  
Database: Dacciwa database  
Original data format(s): Text