

AE.VAN_Od - Biogenic emissions and fluxes, Nangatchori

General information

Dataset name: AE.VAN_Od - Biogenic emissions and fluxes, Nangatchori
Created on: 2005-12-02

Contact(s)

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Period

Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Project(s)

AMMA > AMMA-EOP

Data description

Abstract

- Documentation of biogenic emissions (processes and seasonal variability) => development and validation of interactive modules for biogenic emissions and deposition of reactive trace gasses (NO_x, COV, O₃).
 - Improve emission factors for domestic fires and urban sources (traffic...).
- Build emission inventories of biogenic sources (NO_x, COV), biomass combustions (savannah and domestic fires) and urban sources with spatial and temporal resolution adapted to the chemistry-climate models.
- Study inter-annual and seasonal variations of combustion tracers (BC, CO) and aerosols optical properties. This will be used to build a 3D data base for assimilation and validation in regional and global models => regional studies (deposition-transport of aerosol impact and processes-Meso-Nh-Chimie, and seasonal scale studies-RegCM), as well as large scale studies (TM4, MOCAGE).
 - Quantify NO₂ variability through the troposphere in relation with lightning, and study TTL chemical composition.

Observing strategy

SAOZ, BC, CO and O₃ : continuous measurements. Weekly integrated measurements for particules number, size distribution, diffusion capacity, chemical composition by size. Session measurements (1 or 2 weeks/month) for energy budget and dynamical parameters. Specific campaigns in Cotonou and Djougou for emission factors determination. Extra measurements during SOP : AE_Dust_OD.

Instrument information

Sensor

Manufacturer: GRIMM Technologies Inc.

Geographic information

NANGATCHORI

Location name: NANGATCHORI
Platform type: GROUND STATIONS
West bounding coordinate (°): 9.633
East bounding coordinate (°): 9.633
North bounding coordinate (°): 1.733
South bounding coordinate (°): 1.733

Measured parameters

Soil Temperature

Parameter name: Soil Temperature
Parameter keyword: Land Surface > Soils > Soil Temperature
Unit: Degrees Celsius - °C
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Air Temperature

Parameter name: Air Temperature
Parameter keyword: Atmosphere > Atmospheric Temperature > Surface Temperature > Air Temperature
Unit: Degrees Celsius - °C
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Carbon Monoxide Mixing Ratio

Parameter name: Carbon Monoxide Mixing Ratio
Parameter keyword: Atmosphere > Atmospheric Chemistry
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Aerosol Size Distribution

Parameter name: Aerosol Size Distribution
Parameter keyword: Atmosphere > Aerosols
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Wind Speed

Parameter name: Wind Speed
Parameter keyword: Atmosphere > Atmospheric Winds > Wind Speed
Unit: meters per second - m/s
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Nitric Oxide Mixing Ratio

Parameter name: Nitric Oxide Mixing Ratio
Parameter keyword: Atmosphere > Atmospheric Chemistry
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Vertical Wind Motion

Parameter name: Vertical Wind Motion
Parameter keyword: Atmosphere > Atmospheric Winds > Vertical Wind Motion
Unit: meters per second - m/s
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Scattering Coefficient

Parameter name: Scattering Coefficient
Parameter keyword: Atmosphere > Aerosols
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Nitrogen Dioxide Mixing Ratio

Parameter name: Nitrogen Dioxide Mixing Ratio
Parameter keyword: Atmosphere > Atmospheric Chemistry
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Ozone Mixing Ratio

Parameter name: Ozone Mixing Ratio
Parameter keyword: Atmosphere > Atmospheric Chemistry
Unit: ppmv
Date begin (yyyy-mm-jj): 2005-07-03

Date end (yyyy-mm-jj): 2007-04-06

Wind Direction

Parameter name: Wind Direction
Parameter keyword: Atmosphere > Atmospheric Winds > Wind Direction
Unit: degrees - degrees
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Latent Heat Flux

Parameter name: Latent Heat Flux
Parameter keyword: Atmosphere > Atmospheric Radiation
Unit: Watt per square meter - W.m-2
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Sensible Heat Flux

Parameter name: Sensible Heat Flux
Parameter keyword: Atmosphere > Atmospheric Radiation
Unit: Watt per square meter - W.m-2
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Humidity

Parameter name: Humidity
Parameter keyword: Atmosphere > Atmospheric Water Vapor > Water Vapor Indicators > Humidity
Unit: percent - %
Date begin (yyyy-mm-jj): 2005-07-03
Date end (yyyy-mm-jj): 2007-04-06

Data use information

Use constraints: AMMA data policy
Data policy: AMMA data policy