AS.BVC_T2 - Constant volume balloon, launched from Benin

General information

Dataset name:	AS.BVC_T2 - Constant volume balloon, launched from Benin
Created on:	2006-01-10

Contact(s)

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Period

Date begin (yyyy-mm-jj):	2006-06-16
Date end (yyyy-mm-jj):	2006-07-15

Project(s)

AMMA > AMMA-SOP

Data description

Abstract

The CVB will be deployed during SOP-1 (monsoon onset) and will allow to address several scientific issues :

1) lagrangian trajectory and humidification of the monsoon (diurnal cycle)

2) modulation of the monsoon by the african easterly waves (maximum of perturbation at 700 hPa)

3) estimation of the monsoon penetration over the continent and determination of the monsoon onset

4) quantification of the performances of NCEP/ECMWF on the meteorological fields (wind speed and direction, pressure, temperature and moisture) in the AMMA region.

5) validation of research models (e.g. Méso-NH) for the understanding of the dynamical processes associated with the monsoon onset.

6) assimilation of the full thermodynamical dataset during SOP-1 in 3D-VAR MANDOPAS at th escale of western Africa. The objective is to compute water vapour budgets from the analyses of the full dataset (ground-based, airborne and satellite-borne measurements). The relevance of the CVB data must be addressed using simulations.

Observing strategy

The CVB will be launched at a density level ranging between 1.07 and 1.03. At this time, three possible launching site are investigated (west of Ghana near the coast, Cotonou or Parakou in Benin). The best choice is west of Ghana and a prospection mission is envisaged before the end of the year. In case, there is no possible site in this area, the CVB would then be launched from either Cotonou or Djougou.

The sampling strategy will be mixed: half of the CVB will be launched regularly during SOP-1, in order to document the monsoon onset. The remaining half will be used to increase the sampling before and after the monsoon onset (the intensification of the sampling will rely on the monsoon onset prediction by numerical models at AOC).

Instrument information

Sensor

Manufacturer:	CNES
Model:	PCL1300

Geographic information

COTONOU

Location name:	COTONOU
Plateform type:	GROUND STATIONS
West bounding coordinate (°):	1.2802
East bounding coordinate (°):	22.7562
North bounding coordinate (°):	20.3355
South bounding coordinate (°):	5.1662
Altitude min:	5
Altitude max:	2607

Measured parameters

Air Temperature

Parameter name:	Air Temperature
Parameter keyword:	Atmosphere > Atmospheric Temperature > Surface Temperature > Air Temperature
Unit:	Degrees Celsius - °C
Date begin (yyyy-mm-jj):	2006-06-16
Date end (yyyy-mm-jj):	2006-07-15

Air Pressure

Parameter name:	Air Pressure
Parameter keyword:	Atmosphere > Atmospheric Pressure > Atmospheric Pressure Measurements
Unit:	millibars - mbar
Date begin (yyyy-mm-jj):	2006-06-16
Date end (yyyy-mm-jj):	2006-07-15

Humidity

Parameter name:	Humidity
Parameter keyword:	Atmosphere > Atmospheric Water Vapor > Water Vapor Indicators > Humidity

Unit:	percent - %
Date begin (yyyy-mm-jj):	2006-06-16
Date end (yyyy-mm-jj):	2006-07-15

Data use information

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