

AMMA Instrument Form

EF31

Code	PI (Name, E-Mail)	Labo, AMMA resp. And TT	AMMA Period	Funding Source
AE.RSO3_Od	Valérie Thouret thov@aero.obs-mip.fr	LA, C. Mari TT5	2004-2007	API-France, IP-Europe

Description of the instrument. Sounding PTU + Ozone –electrochemical sonde -

Scientific and technical team. Valérie Thouret , Armand Mariscal (LA, Toulouse) and DMN Benin

Scientific Objectives :

- Sampling the vertical distribution of ozone in the troposphere and in the stratosphere at the vicinity of Cotonou.
- Characterisation of the seasonal (and interannual if possible) variations of ozone over equatorial Africa.
- Assessment of transport pathways from the different source regions.
- More over, this sounding aims to complement the SHADOZ network which provide no ozone data over continental equatorial Africa except Nairobi so far.
- This network aims to characterize the ozone distribution in the tropics and thus to participate to the validation of the AURA satellite products.

Observation Strategy : One sounding a week for the two years of the EOP (Dec. 2004-Nov. 2006) at fixed day and time. The frequency will be three times a week during the SOP (Jun-Aug 2006).

Links with other instruments. Coupling with ground based observations (AE.VAN_OR, AE.Aerosol_RW), aircraft data (SOP et MOZAIC if available) and satellite data (ex: AURA validation in the frame of SHADOZ).

WPs relying on the instrument: 1.1, 2.4, 4.1, 4.3

References : Thouret, V., Marengo, A., Logan, J., Nédélec, P., et Grouhel, C., Comparisons of ozone measurements from the MOZAIC airborne programme and the ozone sounding network at eight locations, *J. Geophys. Res.*, 103, D19, 25,695-25,720, 1998b.

OPERATION and COLLABORATIONS

Deployment (site, dates, logistics). Cotonou from December 2004 on. Site belonging to the meteo station from the airport. Logistics from DMN (Met. Services from Benin) for one sounding a week.

African Partners. DMN from Benin, Brazzaville University (A. Minga)

Other:

INFORMATION for the DATA BASE

Type of platform: radiosounding station from Vaisala (Digicora)

Type of instrument: PTU and ozone sondes from Vaisala

Sensor producer: Vaisala

Serial number of sensor: change every sounding

Information about calibration: calibration before every sounding

Site and position of sensor(s): Cotonou airport, DMN building Lat.: 6.21 N; Long.: 2.23 E, installed in 12/2004.

Measured parameters: Pressure, Altitude, Temperature, Relative Humidity, Ozone, Wind Dir, Wind Speed, Pump Temperature

Data provided to the AMMA data base: PTU+Ozone vertical profiles from the ground to ~30 km altitude

Unit of data provided : hPa, m, °C, %, mPa and ppbv, degree, m.s⁻¹, °C respectively

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