

**AMMA Instrument Form****SF17**

Code	PI (Name, E-Mail)	Labo and TT.	AMMA Period	Funding Source
AS.RAD4..3_Bani	Jean-Martial COHARD Jean-martial.cohard@hmg.inpg.fr	LTHE	june to sept 2006 (SOP)	API-France, IP- Europe

**Description of the instrument** Ground based radiometer at 4.3 Ghz : measures brightness temperatures at H or V polarization for estimating of surface soil moisture. The radiometer is installed on a 6m telescopic mast.

**Scientific team.** Jean-Martial Cohard (LTHE), Thierry Pellarin (LTHE), Jean-Paul Laurent, Luc Descroix

**Technical team.** Bernard Mercier (LTHE)

**Scientific Objectives.** Evaluation surface humidity with a passive 4.3Ghz radiometer. At local scale and at larger scales. The brightness temperature measurements at local scale will provide an essential calibration to overcome the gap between local soil humidity measurements and large scale satellite observations.

**Observation Strategy.** Continuous measurements during a complete rainfall season + punctual transect during installation, survey and removal mission.

**Links with other instruments.** Soil humidity and meteorological instrumentation around banizoumbou, AMSR satellite imagery.

**WPs relying on the instrument:** 1.2, 2.1, 2.3, 4.3 (satellites), 4.1 (assimilation)

**OPERATION and COLLABORATIONS****Déploiement (site, dates, logistics).**

Niger (Banizoumbou, L.Descroix, B.Cappelaere). Installation in june 2006. At least a complete rainfall season from june 2006 to september 2006.

**African Partners.****Other.****INFORMATION for the DATA BASE**

**Type of platform:** ground-based observations

**Type of instrument:** C-band radiometer (4.3 GHz)

**Sensor producer:** LTHE/CESBIO

**Serial number of sensor:** N/A

**Information about calibration:** Calibration using cold source (sky measurements)

**Site and position of sensor(s):** Niger (Banizoumbou)

**Measured parameters:** Brightness temperatures ( $T_B$ )

**Data provided to the AMMA data base:** Brightness temperature ( $T_B$ ), Surface volumetric soil moisture measurements ( $H_v$ )

**Unit of data provided :**  $T_B$  in °K,  $H_v$  in %

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