

# AS.mwrp\_S - Microwave radiometer profiler, ARM station, Niamey

## General information

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Dataset name: AS.mwrp\_S - Microwave radiometer profiler, ARM station, Niamey  
Created on: 2006-01-13

### Contact(s)

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Slingo Anthony - ESSC - as@mail.nerc-essc.ac.uk (PI or Lead scientist)

### Period

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Date begin (yyyy-mm-jj): 2006-01-01  
Date end (yyyy-mm-jj):

### Project(s)

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AMMA > AMMA-SOP

## Data description

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### Abstract

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The microwave radiometer profiler (MWRP) provides vertical profiles of temperature, humidity, and cloud liquid water content as a function of height or pressure at approximately 5-minute intervals for nearly all weather conditions. The profiles are derived from measurements of absolute microwave radiances (expressed as "brightness temperatures") obtained at twelve frequencies in the range of 22-30 GHz and 51-59 GHz. The data are useful for input to numerical weather forecast models and others that require continuous, high temporal resolution profiles. The microwave radiance measurements are useful for testing models of microwave radiation transfer used to derive the profiles.

### Observing strategy

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Measurements made every 5 minutes. The MWRP will be used in Niamey in the event of a problem with the standard 5-channel MWR. Continuous use of this instrument in support of AMMA is precluded due to difficulties with the calibration of temperature channels in warm climates.

## Instrument information

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### Sensor

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Instrument type: MR > MICROWAVE RADIOMETER  
Model: MWRP

## Geographic information

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### Niamey

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Location name:	Niamey
Platform type:	GROUND STATIONS
West bounding coordinate (°):	2.1758
East bounding coordinate (°):	2.1758
North bounding coordinate (°):	13.4773
South bounding coordinate (°):	13.4773

## Measured parameters

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### Humidity

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Parameter name:	Humidity
Parameter keyword:	Atmosphere > Atmospheric Water Vapor > Water Vapor Indicators > Humidity
Unit:	Not communicated - N.C
Date begin (yyyy-mm-jj):	2006-01-01

### Air Temperature

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Parameter name:	Air Temperature
Parameter keyword:	Atmosphere > Atmospheric Temperature
Unit:	Not communicated - N.C
Date begin (yyyy-mm-jj):	2006-01-01

### Cloud liquid water content

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Parameter name:	Cloud liquid water content
Parameter keyword:	Atmosphere > Clouds
Unit:	Not communicated - N.C
Date begin (yyyy-mm-jj):	2006-01-01

## Data use information

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Use constraints:	AMMA data policy
Data policy:	AMMA data policy
Database:	ARM Archive