

AS.Ronsard_O - Doppler C-band radar, Kopargo, Ouémé meso-scale site

General information

Dataset name: AS.Ronsard_O - Doppler C-band radar, Kopargo, Ouémé meso-scale site
Created on: 2006-01-10

Contact(s)

Scialom Georges - CETP - scialom@cetp.ipsl.fr (PI or Lead scientist)

Period

Date begin (yyyy-mm-jj): 2006-06-15
Date end (yyyy-mm-jj): 2006-09-15

Project(s)

AMMA > AMMA-SOP

Data description

Abstract

Atmospheric Dynamics and thermodynamics at convective scale and mesoscale, scale interactions, quantification of mass, moment, heat, and water of observed systems (squall lines...) at these scales. Microphysical characterization of systems and dynamic-microphysical interactions. Role of the ice phase. Processes implied in the life cycle of the deep convection (initiation in clear air, development, decay) thanks to clear air capabilities. Quantitative estimate of rain. Sensitivity tests using a radar simulator and meso-NH runs, and validation of satellite rain estimation methods. Validation/initialization of model by radar data (wind and hydrometeor type). RONSARD is a radar rather important and relatively costly to set up, but it allows obtaining a good resolution on the structure of rain and wind fields. It is moreover not much attenuated (C band). It also works in clear air within the boundary layer, providing Cn2 and wind fields.

Observing strategy

Documentation of the internal structure of systems convective systems by volumetric scans and vertical scans in coordination with the X-Port radar and dense pluviographs networks on the Donga basin.

Instrument information

Sensor

Instrument type:	DOPPLER RADAR
Manufacturer:	Centre d'Etude des Environnement Terrestres et Planétaires
Model:	C-band Doppler polarimetric radar

Geographic information

Kopargo

Location name:	Kopargo
Plateform type:	GROUND STATIONS
West bounding coordinate (°):	1.55
East bounding coordinate (°):	1.55
North bounding coordinate (°):	9.839
South bounding coordinate (°):	9.839

Measured parameters

Radar reflectivity Z

Parameter name:	Radar reflectivity Z
Parameter keyword:	Spectral/Engineering > Radar > Radar Reflectivity
Unit:	dBZ - dBZ
Date begin (yyyy-mm-jj):	2006-06-15
Date end (yyyy-mm-jj):	2006-09-15

Doppler Spectral Width

Parameter name:	Doppler Spectral Width
Parameter keyword:	Spectral/Engineering > Radar
Unit:	m2s2 - m2s2
Date begin (yyyy-mm-jj):	2006-06-15
Date end (yyyy-mm-jj):	2006-09-15

Cross-correlation coefficient

Parameter name:	cross-correlation coefficient
Parameter keyword:	Spectral/Engineering > Radar
Unit:	Dimensionless
Date begin (yyyy-mm-jj):	2006-06-15
Date end (yyyy-mm-jj):	2006-09-15

Differential reflectivity

Parameter name: differential reflectivity
Parameter keyword: Spectral/Engineering > Radar
Unit: deciBel - dB
Date begin (yyyy-mm-jj): 2006-06-15
Date end (yyyy-mm-jj): 2006-09-15

Differential phase shift

Parameter name: differential phase shift
Parameter keyword: Spectral/Engineering > Radar
Unit: degrees - degrees
Date begin (yyyy-mm-jj): 2006-06-15
Date end (yyyy-mm-jj): 2006-09-15

Radial wind speed

Parameter name: Radial wind speed
Parameter keyword: Atmosphere > Atmospheric Winds
Unit: meter per second - m/s
Date begin (yyyy-mm-jj): 2006-06-15
Date end (yyyy-mm-jj): 2006-09-15

Data use information

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