

# AEROCLO-sA PEGASUS supermicron particle number size distribution

## General information

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Dataset name: AEROCLO-sA PEGASUS supermicron particle number size distribution  
Dataset DOI: 10.6096/AEROCLO.1786  
Created on: 2019-04-03

### Contact(s)

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### Period

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Date begin (yyyy-mm-jj): 2017-08-20  
Date end (yyyy-mm-jj): 2017-09-13

### Project(s)

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AEROCLO

## Data description

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### Abstract

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Aerosol particle number size distribution between 0.25 and 32 micrometers measured at the surface level by the PEGASUS mobile platform located at the SANUMARC research center in Henties Bay, Namibia.

### Observing strategy

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The aerosol particle number size distribution at diameters larger than 0.3 micrometers was measured by a GRIMM optical particle counter (model 1.129, GRIMM) operated in the PEGASUS mobile platform. Air was taken into the instrument from one of the two custom-built high volume wind-orientable inlet of the mobile platform. Data were acquired continuously at 6 seconds time resolution.

### References

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Formenti, P., B. D'Anna, C. Flamant, M. Mallet, S.J. Piketh, K. Schepanski, F. Waquet, F. Auriol, G. Brogniez, F. Burnet, J. Chaboureaud, A. Chauvigné, P. Chazette, C. Denjean, K. Desboeufs, J. Doussin, N. Elguindi, S. Feuerstein, M. Gaetani, C. Giorio, D. Klopper, M.D. Mallet, P. Nabat, A. Monod, F. Solmon, A. Namwoonde, C. Chikwililwa, R. Mushi, E.J. Welton, and B. Holben, 2019: The Aerosols, Radiation and Clouds in Southern Africa Field Campaign in Namibia: Overview, Illustrative Observations, and Way Forward. Bull. Amer. Meteor. Soc., 100, 1277?1298, <https://doi.org/10.1175/BAMS-D-17-0278.1>

## Instrument information

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### Sensor

Instrument type:	PMS > Particle Measuring System
Manufacturer:	GRIMM Technologies Inc.
Model:	1.109

### Sensor resolution

Observation frequency:	6 seconds
Horizontal coverage:	Point measurement

### Sensor location

Longitude (°):	-22.1
Latitude (°):	14.5
Height above ground (m):	2

## Geographic information

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### Henties Bay

Location name:	Henties Bay
Platform type:	GROUND STATIONS

## Measured parameter

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### Aerosol Particle Properties

Parameter keyword:	Atmosphere > Aerosols > Aerosol Particle Properties
Unit:	cm-3
Acquisition methodology and quality:	<p>Number size distribution were measured by the GRIMM OPC model 1.109 every 6 seconds. Time is expressed in UTC. Data have been averaged every 2 minutes and are presented as number of particles per size bin (dN, cm-3). The nominal acquisition diameters corresponding to the refractive index of dolomite dust (1.56 - 0i) have been corrected to mean refractive index of the aerosol observed during the field campaign(n=1.60-0.002). Following that, the measured particle concentrations per size bin were corrected for particle losses through the pipelines using the procedure presented in von Der Weiden et al. (2009), Atmos. Meas. Tech., 2, 479-494, 2009</p> <p><a href="http://www.atmos-meas-tech.net/2/479/2009/">www.atmos-meas-tech.net/2/479/2009/</a></p>

## Data use information

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Use constraints:	The Principal Investigator(s) of the AEROCLO-sA campaign is Paola Formenti. If you intend to use the following data please contact her by e-mail: <a href="mailto:paola.formenti@lisa.ipsl.fr">paola.formenti@lisa.ipsl.fr</a> . Data were acquired with the support of Anaïs Feron (LISA) and of the Technical Department of the LISA. The LISA ( <a href="http://www.lisa.u-pec.fr">www.lisa.u-pec.fr</a> ) is a joint research unit of the CNRS, University Paris-Est Créteil and University of Paris).
Data policy:	AEROCLO data policy
Database:	AEROCLO-sA on BAOBAB
Original data format(s):	ascii text