

# AEROCLO-sA three-dimensional air mass back-trajectories for the ground-based site of Henties Bay - 9 km horizontal resolution

## General information

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Dataset name: AEROCLO-sA three-dimensional air mass back-trajectories for the ground-based site of Henties Bay - 9 km horizontal resolution  
Dataset DOI: 10.6096/BAOBAB-AEROCLO.1812  
Created on: 2020-12-16

## Contact(s)

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## Period

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Date begin (yyyy-mm-jj): 2017-08-21  
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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Three-dimensional air mass back-trajectories calculated using the NOAA HYbrid Single-Particle Lagrangian Integrated Trajectory Model (HYSPLIT; Draxler and Rolph, 2015). The model uses the Weather and Research Forecasting (WRF 3.7, Skamarock et al., 2008) simulations at 50, 9 and a nested simulation at 3 km of horizontal resolution. The global meteorological analyses from the National Centers for Environmental Prediction (NCEP) with the GlobalForecast System (GFS) products are used to nudge WRF hourly with pressure, temperature, humidity and wind. To preserve large scale circulations and small scale variability, the 'spectral nudging' technique was applied (Von Storch et al., 2000).

Data are provided as daily ascii files and images in png format

### Observing strategy

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Simulations for Henties Bay at 50 and 9 km and a nested simulation at 3 km of horizontal resolution.

### References

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Draxler, R.R. and Rolph, G.D. (2015) HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) Model Access via NOAA ARL READY Website (<http://www.arl.noaa.gov/HYSPLIT.php>) on February 24th, 2015. NOAA

Air Resources Laboratory, College Park.

Skamarock, W., J. Klemp, J. Dudhia, D. Gill, D. Barker, M. Duda, X.-Y. Huang, W. Wang, J. Powers, A Description of the Advanced Research WRF Version 3, 10.13140/RG.2.1.2310.6645, 2008

von Storch, H., H. Langenberg, and F. Feser, 2000: A spectral nudging technique for dynamical downscaling purposes. Mon. Wea. Rev., 128, 3664-3673, doi:10.1175/1520-0493(2000)128<3664:ASNTFD>2.0.CO;2.

## Geographic information

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### Henties Bay

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Location name:	Henties Bay
Platform type:	Atmosphere

## Measured parameter

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### Atmosphere

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Parameter keyword:	Atmosphere
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## Data use information

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Use constraints:	<p>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>. The back-trajectories were calculated by Guillaume Siour (LISA, <a href="mailto:guillaume.siour@lisa.ipsl.fr">guillaume.siour@lisa.ipsl.fr</a>). Please consider authorship for both whenever using the data.</p> <p>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).</p>
Data policy:	AEROCLO data policy
Original data format(s):	ascii text png