

README concerning the ECHAM5-related dataset available via DKRZ / pool/data resources

Date: 29 April 2021

T I T L E O F T H E D A T A S E T

ECHAM5 input and boundary conditions

P A T H T O T H E D A T A S E T

/pool/data/ECHAM5

O W N E R / P R O D U C E R O F T H E D A T A S E T

TBD

D A T A U S A G E L I C E N S E

The data are provided for use with the ECHAM5 GCM model. By agreeing to the ECHAM5 licence, the reuse of the ECHAM5 dataset available via /pool/data is permitted for that purpose.

C O N T E N T O F T H E D A T A S E T

Data is available for a number of different spatial resolutions:
T106/ T159/ T21/ T255/ T31/ T319/ T42/ T511/ T63/ T85/

The variables contained are those required by ECHAM5 to be initialised and/or equipped with boundary conditions during a simulations, e.g. initial climate conditions, ozone or sea surface temperatures.

Furthermore, the ECHAM5 project contains datasets required for ECHAM5 submodels, e.g. HAM, MOZART, JSBACH.

The datasets are available in a format specific for operation with the ECHAM5 model and are therefore suited for just this purpose.

D A T A U S A G E S C E N A R I O S

The data are provided for use with the ECHAM5 GCM model. Anybody running the ECHAM5 atmospheric model requires access to this data.

M E T H O D S U S E D F O R D A T A C R E A T I O N

The datasets are available in a format specific for operation with the ECHAM5 model and are therefore suited for just this purpose.

The basis of the data are several external data sources (ECMWF, AEROCOM community, SRES scenario providers).

In some cases, the originators and creation methods of the data files are mentioned in the netcdf-file headers. For most cases, the documentation of the input files is provided in the corresponding ECHAM5 publications, e.g.

Roeckner, E., Bäuml, G., Bonaventura, L., Brokopf, R., Esch, M., Giorgetta, M., ... & Tompkins, A. (2003). The atmospheric general circulation model ECHAM 5. PART I: Model description.

Zhang, K., Declan O'Donnell, Jan Kazil, Philip Stier, Stefan Kinne, Ulrike Lohmann, Sylvaine Ferrachat et al. "The global aerosol-climate model ECHAM-HAM, version 2: sensitivity to improvements in process representations." Atmospheric Chemistry and Physics 12, no. 19 (2012): 8911-8949.

Dentener, F., Kinne, S., Bond, T., Boucher, O., Cofala, J., Generoso, S., Ginoux, P., Gong, S., Hoelzemann, J. J., Ito, A., Marelli, L., Penner, J. E., Putaud, J.-P., Textor, C., Schulz, M., van der Werf, G. R., and Wilson, J.: Emissions of primary aerosol and precursor gases in the years 2000 and 1750 prescribed data-sets for AeroCom, Atmos. Chem. Phys., 6, 4321-4344, <https://doi.org/10.5194/acp-6-4321-2006>, 2006.

I S S U E S

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V O L U M E O F T H E D A T A S E T (A N D P O S S I B L E C H A N G E S T H E R E O F)

The volume of the dataset is about 46GB. It is not expected that this volume increases in the future.

T I M E H O R I Z O N O F T H E D A T A S E T O N / P O O L / D A T A

ECHAM5 is still in use, therefore long-term access to these data is required. At the moment, the storage on /pool/data is granted until XXX.