

README concerning the dataset Nud4ECHAM available via DKRZ /pool/  
data resources

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

Nudging Data for ECHAM (Nud4ECHAM)

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

/pool/data/nudging

## 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

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

The usage of the provided data is open for any DKRZ user. The licensing and citation of the data follows those detailed in DKRZ's user documentation: [https://docs.dkrz.de/doc/dataservices/finding\\_and\\_accessing\\_data/era\\_data/index.html#era-data](https://docs.dkrz.de/doc/dataservices/finding_and_accessing_data/era_data/index.html#era-data) (see below)

For ERA5 hourly and daily data at surface level:

Hersbach, H., Bell, B., Berrisford, P., Biavati, G., Horányi, A., Muñoz Sabater, J., Nicolas, J., Peubey, C., Radu, R., Rozum, I., Schepers, D., Simmons, A., Soci, C., Dee, D., Thépaut, J-N. (2018): ERA5 hourly data on single levels from 1979 to present, Copernicus Climate Change Service (C3S) Climate Data Store (CDS). 10.24381/cds.adbb2d47, accessed at DKRZ on <DD-MMM-YYYY>

For ERA5 hourly and daily data at pressure or model levels:

Hersbach, H., Bell, B., Berrisford, P., Biavati, G., Horányi, A., Muñoz Sabater, J., Nicolas, J., Peubey, C., Radu, R., Rozum, I., Schepers, D., Simmons, A., Soci, C., Dee, D., Thépaut, J-N. (2018): ERA5 hourly data on pressure levels from 1979 to present. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). 10.24381/cds.bd0915c6, accessed at DKRZ on <DD-MMM-YYYY>

ERA-Interim:

Product description: Berrisford, P., D. Dee, K. Fielding, M. Fuentes, P. Kallberg, S. Kobayashi and S. Uppala. (2011): The ERA-Interim archive, ERA Report Series, August 2009, <https://www.ecmwf.int/en/eLibrary/8173-era-interim-archive>.

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

The data set contains extracts from the MARS archive of long term analysis data and, if needed, current analysis data from ECMWF as raw data for the use as "nudging data" when spectral nudging is applied in echam6. These extracts contain the spectral model output on sigma-hybrid model levels as they are needed for spectral nudging. The nudging data are available in various echam6 model resolutions in exactly the format as they are needed by echam6. The interpolation from the original extracts is time consuming, it is therefore useful to provide them in the most common echam6 resolutions.

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

This dataset is important for a large number of DKRZ users, across multiple projects, running the ECHAM6 atmospheric model in nudged mode.

#### 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 data were downloaded from ECMWF and interpolated by certain cdo commands. For more information regarding the creation of the nudging data, please contact Sebastian Rast (sebastian.rast@mpimet.mpg.de). ERA-5 nudging data will be produced at DKRZ using similar routines.

#### I S S U E S

Access to ERA40 data is available upon request to either Sebastian Rast (sebastian.rast@mpimet.mpg.de) or Angelika Heil (heil@dkrz.de).

#### 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 reanalysis data excluding ERA-5 have a volume of 17TB.

This volume will increase significantly with the availability of ERA-5 nudging data. The total amount of granted disk space is 30TB.

#### 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

Although being a rather old model, ECHAM5/6 is still heavily used in the community. Therefore, resources have been applied and granted until December 2026.