What is ERA-Interim

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> ⚠️ **ERA-Interim production stopped on 31st August 2019**
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> For ERA-Interim (1st January 1979 to 31st August 2019) access through the ECMWF Web API **stopped on 01 June 2023**
>
> Its successor ERA5 is available from the Climate Data Store (CDS) (What are the changes from ERA-Interim to ERA5?) and users are strongly advised to migrate to ERA5 (How to download ERA5).
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> For those users who still need access to ERA-Interim after 01 June 2023 (subject to further notice), they can do so via the Climate Data Store (CDS) API.

ERA-Interim is a climate reanalysis dataset, covering the period from 1979 to 31st August 2019. ERA stands for 'ECMWF Re-Analysis' and refers to a series of research projects at ECMWF which produced various datasets (ERA-Interim, ERA-40, etcetera).

ERA-Interim data is open access and free to download for all uses from the ECMWF data archive. Please see our guidelines on How to download ERA-Interim data from the ECMWF data archive.

ERA-Interim uses a fixed version of a numerical weather prediction (NWP) system (IFS - CY31r2) to produce reanalysed data. The fixed version ensures that no spurious trends are caused by an evolving NWP system, though the changing observing system can still create such trends. The NWP system blends, or assimilates observations with a previous forecast to obtain the best fit to both. The result of this blending is called an analysis and is the starting point for the next forecast. In this manner, data is produced at increasingly later dates.

The ERA-Interim dataset contains atmospheric and surface parameters:

- 6-hourly atmospheric fields on model levels, pressure levels, potential temperature and potential vorticity
- 3-hourly surface fields and daily vertical integrals
- Monthly averages of daily means
- Synoptic monthly averages at 00 UTC, 06 UTC, 12 UTC, 18 UTC

ERA-Interim data is archived in the GRIB file format.

Please see ERA-Interim documentation for full details (including list of parameters).

For further details please see:

Berrisford, P., P. Kållberg, S. Kobayashi, D. Dee, S. Uppala, A. J. Simmons, P. Poli, and H. Sato, 2011: Atmospheric conservation properties in ERA-Interim. *Q.J.R. Meteorol. Soc.*, **137**: 1381–1399. doi: 10.1002/qj.864

Related articles

- Transformation or regridding of ECMWF Reanalyses data
- Model grid box and time step
- ERA-Interim: documentation
- ERA-Interim: How to calculate daily total precipitation
- ERA-Interim known issues