European radar data now available for testing via Open Radar Data (ORD) API

As part of the EU- and EUMETNET-funded **RODEO - project**, partners have developed **MeteoGate**, a new platform to discover and download meteorological data. One of its local services is the **Open Radar Data (ORD) API**, which provides access to OPERA single-site radar volume data, OPERA composite products and demonstration of national radar-based products via links to national archives.

The ORD API is currently in **pre-operational status**, delivering real-time datasets and open for external users to test. Archival data will be added later in 2025.

Data available in ORD API

1. **European single-site radar data** (via EUMETNET OPERA)

   o 24-hour rolling cache, with a long-term archive (2012–, coming later)
   o Formats: BUFR (older) and ODIM HDF5 (recent)
   o License: CC BY 4.0 (with exceptions noted in metadata)
   o Currently mainly includes:
      ▪ DBZH (Doppler-filtered horizontal reflectivity factor, with national QC applied)
      ▪ TH (unfiltered horizontal reflectivity factor)
      ▪ VRADH (horizontal radial velocity)
   o Basic dual-pol variables (e.g. correlation coefficient, differential reflectivity, differential phase shift, specific differential phase) are planned to be added from 2027 onwards (TBC)

2. **European OPERA composite products**

   o Products: maximum reflectivity, instantaneous rain rate, 1-hour accumulation
   o 24-hour rolling cache and long-term archive (2012–, coming later)
   o Formats: ODIM HDF5 and cloud-optimized GeoTIFF (planned)
   o License: CC BY 4.0 (effective **13 November 2025**; currently test-only access)

3. **National radar products**

   o Examples of national composites, rain rate composites, accumulations, echo tops
   o Access: via links to national interfaces (24 access of links)
   o Formats: ODIM HDF5 or cloud-optimized GeoTIFF

Testing the ORD API

Once **MeteoGate** interface is published, you will be able to discover and access data using the MeteoGate Data Explorer. You can also browse available datasets via MeteoGate and WIS 2.0 through the WMO WIS 2.0 Global Discovery Catalogue. Additionally, you can subscribe to notifications about new and updated data and metadata published through the Data Supply components and republished via the WMO WIS 2.0 Global Broker.

During this **pre-operational phase**, data can be accessed directly through the ORD API. Please note that your IP range must be whitelisted in advance—contact support.opera@eumetnet.eu to request access.

Detailed instructions for downloading data and products are available at: ORD API documentation

If you have any issue to report during the testing period about the API, you can create an issue in this above-mentioned GitHub repository.

Please note as the service is **pre-operational**, service disruptions and missing data are expected. These are notified, if possible, at: ORD API status. Full operational status is targeted for **January 2026**.

Links:

EUMETNET OPERA

ODIM 2.4.1

OPERA Support