

## European Ground Motion Service: Ortho product – Vertical Component between 2015 and 2020, Jul. 2022

The European Ground Motion Service (EGMS) is a component of the Copernicus Land Monitoring Service. EGMS provides consistent, regular, standardised, harmonised and reliable information regarding natural and anthropogenic ground motion phenomena over the Copernicus Participating States and across national borders, with millimetre accuracy. This set of metadata describes the third product level of EGMS: Ortho.

This EGMS Ortho product exploits the information provided by ascending and descending orbits of the Calibrated product ([https://sdi.eea.europa.eu/catalogue/srv/eng/catalog\\_search#/metadata/dbc229ee-b94e-44e1-b0db-9bc57076bef](https://sdi.eea.europa.eu/catalogue/srv/eng/catalog_search#/metadata/dbc229ee-b94e-44e1-b0db-9bc57076bef) 1) to derive two further layers: one of purely vertical displacements (the one described by this metadata), the other of purely east-west displacements. Both layers are resampled to a 100 m grid. The Ortho product eases the interpretation process of non-experts since the viewing geometry has not to be considered anymore.

EGMS Ortho is visualised as a vector map of measurement points colour-coded by average velocity (vertical or east-west components) and distributed to users in comma-separated values format. Each point is associated with a time series of displacement, i.e. a plot with values of displacement per acquisition of the satellite.

### Simple

<b>Date (Creation)</b>	2021-10-05			
<b>Date (Publication)</b>	2022-07-15			
<b>Edition</b>	01.00			
<b>Citation identifier</b>	copernicus_v_3035_100_m_egms-ortho-vert_p_2015-2020_v01_r00			
<b>Status</b>	Superseded			
<b>Point of contact</b>	<b>Organisation name</b>	<b>Individual name</b>	<b>Electronic mail address</b>	<b>Website</b> <b>Role</b>
	European Environment Agency		copernicus@eea.europa.eu	<a href="https://land.copernicus.eu">https://land.copernicus.eu</a> Distributor
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### Point of contact

No information provided.

<b>Maintenance and update frequency</b>	Annually
<b>GEMET - INSPIRE themes, version 1.0</b>	<ul style="list-style-type: none"> <li>Natural risk zones</li> </ul>
<b>Keywords</b>	
<b>Continents, countries, sea regions of the world.</b>	<ul style="list-style-type: none"> <li>Iceland</li> <li>Norway</li> <li>EU27 (from 2020)</li> <li>United Kingdom</li> </ul>
<b>Keywords</b>	
<b>GEMET</b>	<ul style="list-style-type: none"> <li>infrastructure</li> <li>geological process</li> </ul>

	<ul style="list-style-type: none"> <li>• built environment</li> <li>• urban area</li> <li>• earth observation</li> <li>• geo-referenced data</li> <li>• risk reduction</li> <li>• subsidence</li> <li>• landslide</li> </ul>
<b>Spatial scope</b>	<ul style="list-style-type: none"> <li>• <a href="#">European</a></li> </ul>
<b>Temporal resolution</b>	<ul style="list-style-type: none"> <li>• Weekly</li> </ul>
<b>EEA topics</b>	<ul style="list-style-type: none"> <li>• Land use</li> <li>• Buildings and construction</li> <li>• Production and consumption</li> </ul>
<b>Access constraints</b>	Other restrictions
<b>Other constraints</b>	<a href="#">no limitations to public access</a>
<b>Use constraints</b>	Other restrictions
<b>Other constraints</b>	<p>The Copernicus programme is governed by Regulation (EU) No 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU. Within the Copernicus programme, a portfolio of land monitoring activities has been delegated by the European Union to the EEA. The land monitoring products and services are made available through the Copernicus land portal on a principle of full, open and free access, as established by the Copernicus data and information policy Regulation (EU) No 1159/2013 of 12 July 2013. The Copernicus data and information policy is in line with the EEA policy of open and easy access to the data, information and applications derived from the activities described in its management plan.</p> <p>Free, full and open access to this data set is made on the conditions that:</p> <ol style="list-style-type: none"> <li>1. When distributing or communicating Copernicus dedicated data and Copernicus service information to the public, users shall inform the public of the source of that data and information.</li> <li>2. Users shall make sure not to convey the impression to the public that the user's activities are officially endorsed by the Union.</li> <li>3. Where that data or information has been adapted or modified, the user shall clearly state this.</li> <li>4. The data remain the sole property of the European Union. Any information and data produced in the framework of the action shall be the sole property of the European Union. Any communication and publication by the beneficiary shall acknowledge that the data were produced "with funding by the European Union".</li> </ol>
<b>Spatial representation type</b>	Vector
<b>Distance</b>	100 m
<b>Language of dataset</b>	English
<b>Character set</b>	UTF8
<b>Topic category</b>	<ul style="list-style-type: none"> <li>• Geoscientific information</li> </ul>

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<b>Begin date</b>	2015-02-01
<b>End date</b>	2020-12-31

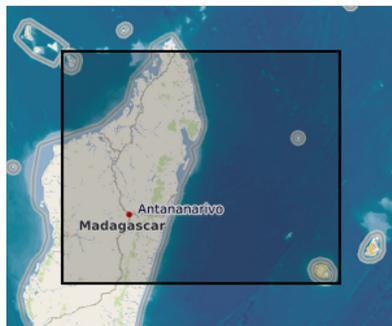
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Coordinate reference system identifier	<a href="#">EPSG:3035</a>		
Coordinate reference system identifier	<a href="#">EPSG:32740</a>		
Coordinate reference system identifier	<a href="#">EPSG:32620</a>		
Coordinate reference system identifier	<a href="#">EPSG:32622</a>		
Coordinate reference system identifier	<a href="#">EPSG:32788</a>		
Distribution format	<ul style="list-style-type: none"> <li>• ascii (.csv, .txt, .sql) ( )</li> </ul>		
OnLine resource	<p><b>Protocol</b></p> <p>WWW:DOWNLOAD-1.0-http--download</p> <p>WWW:LINK-1.0-http--link</p> <p>WWW:LINK-1.0-http--link</p> <p>WWW:LINK-1.0-http--link</p> <p>WWW:LINK-1.0-http--link</p>	<p><b>Linkage</b></p> <p><a href="https://egms.land.copernicus.eu/">https://egms.land.copernicus.eu/</a></p> <p><a href="https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document">https://land.copernicus.eu/user-corner/technical-library/egms-algorithm-theoretical-basis-document</a></p> <p><a href="https://land.copernicus.eu/user-corner/technical-library/egms-product-user-manual">https://land.copernicus.eu/user-corner/technical-library/egms-product-user-manual</a></p> <p><a href="https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report">https://land.copernicus.eu/user-corner/technical-library/egms-quality-control-report</a></p> <p><a href="https://land.copernicus.eu/pan-european/european-ground-motion-service">https://land.copernicus.eu/pan-european/european-ground-motion-service</a></p>	<p><b>Name</b></p> <p>European Ground Motion Service platform</p> <p>Quality Assurance &amp; EGMS and the Ortho product</p> <p>Product User Manual</p> <p>Quality Assurance &amp; Control Report 1, 2</p> <p>Other useful documents</p>
Hierarchy level	Dataset		
<b>Conformance result</b>			
Date (Publication)	2010-12-08		
Explanation	See the referenced specification		
Statement	<p>The Ortho product is based on the decomposition of the Calibrated product to provide two discrete geospatial layers containing purely vertical (the one described in this metadata) and purely east-west displacements resampled to a 100 m grid. In summary, the process involves the following tasks:</p>		

- i) identify all the cells with at least one measurement point per orbit,
- ii) average the time series per orbit,
- iii) interpolate ascending and descending time series to a common six-day sampling and
- iv) estimate the vertical and east-west components following equations weighted on the estimated accuracy of the input measurements.

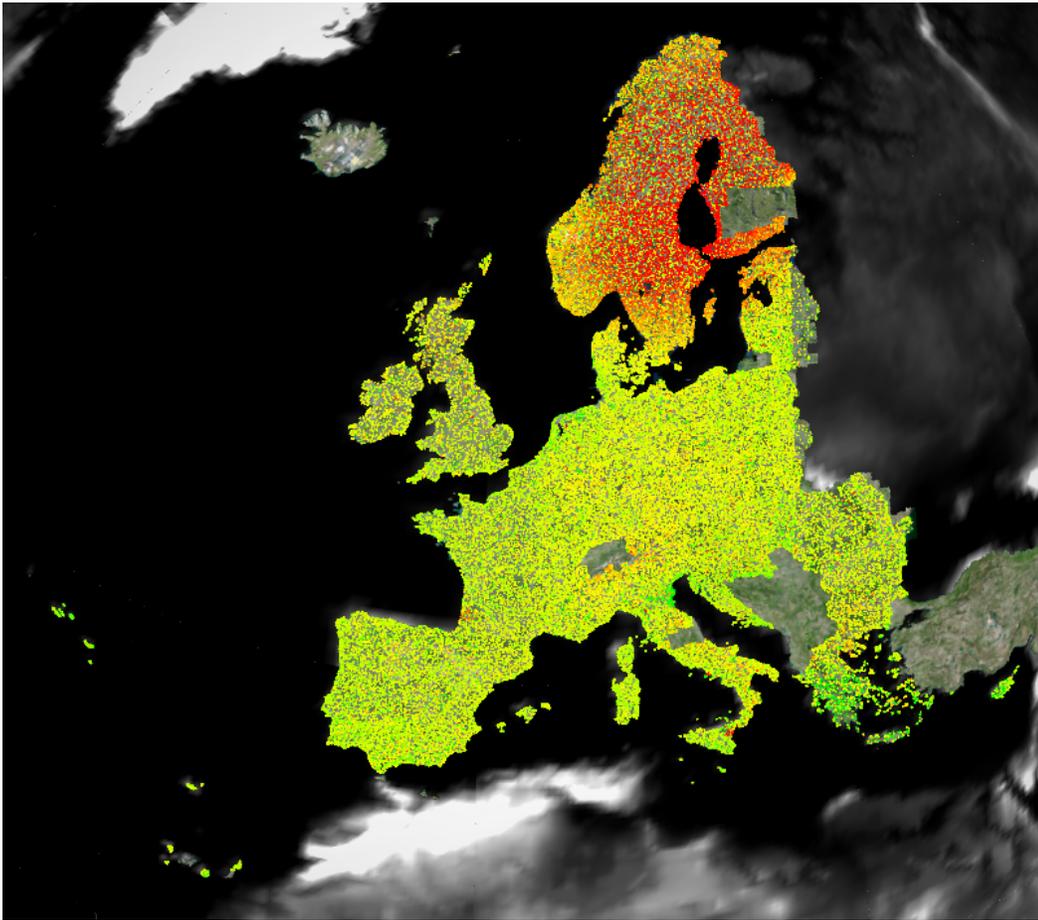
**Source**

- [European Ground Motion Service: Calibrated product between 2015 and 2020, Jul. 2022](#)

**Metadata**

<b>File identifier</b>	5957ac99-3fb1-416c-8a56-2fb62fae74c1 <a href="#">XML</a>		
<b>Metadata language</b>	English		
<b>Character set</b>	UTF8		
<b>Hierarchy level</b>	Dataset		
<b>Date stamp</b>	2023-02-17T10:28:05.024Z		
<b>Metadata standard name</b>	ISO 19115/19139		
<b>Metadata standard version</b>	1.0		
<b>Metadata author</b>	<b>Organisation name</b>	<b>Individual name</b>	<b>Electronic mail address</b> <b>Website Role</b>
	European Environment Agency		sdi@eea.europa.eu      Point of contact

**Overviews**



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