

ISO Geodetic Registry

| | | |
|---------------------------|--|--|
| <i>Item class</i> | GeodeticCRS | |
| <i>Name</i> | WGS 84 (G730) - LatLon | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 374 | |
| <i>Information source</i> | <i>Title</i> | Maintenance and Enhancement of the World Geodetic System 1984 |
| | <i>Author</i> | S. Malys, J.A. Slater |
| | <i>Publisher</i> | Institute of Navigation |
| | <i>Publication date</i> | 1994-09 |
| | <i>Edition date</i> | |
| | <i>Series/Journal name</i> | Proceedings of the 7th International Technical Meeting of the Satellite Division of The Institute of Navigation (ION-GPS-1994), Salt Lake City, UT, September 1994 |
| | <i>Page</i> | 17-24 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Replaces WGS 84 TRANSIT - LatLon. Replaced by WGS84 (G873) - LatLon. | |
| <i>Scope</i> | Spatial Referencing and GPS satellite navigation. | |
| <i>Datum</i> | World Geodetic System 1984 (G730) | |
| <i>Coordinate System</i> | Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree | |

Extent

| | | |
|--------------------------------|-----------------------------|--------|
| <i>Description</i> | World. | |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | -180.0 |
| | <i>North-bound latitude</i> | 90.0 |
| | <i>East-bound longitude</i> | 180.0 |
| | <i>South-bound latitude</i> | -90.0 |

ISO Geodetic Registry

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|-----------------------------------|--|--|
| <i>Item class</i> | GeodeticDatum | |
| <i>Name</i> | World Geodetic System 1984 (G730) | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 116 | |
| <i>Alias</i> | WGS 84 (G730) | |
| <i>Information source</i> | <i>Title</i> | Maintenance and Enhancement of the World Geodetic System 1984 |
| | <i>Author</i> | S. Malys, J.A. Slater |
| | <i>Publisher</i> | Institute of Navigation |
| | <i>Publication date</i> | 1994-09 |
| | <i>Edition date</i> | |
| | <i>Series/Journal name</i> | Proceedings of the 7th International Technical Meeting of the Satellite Division of The Institute of Navigation (ION-GPS-1994), Salt Lake City, UT, September 1994 |
| | <i>Page</i> | 17-24 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Replaces the original Transit-derived World Geodetic System 1984 from 1994-06-29. Replaced by World Geodetic System 1984 (G873) from 1997-01-29. Used in broadcast ephemeris from 1994-06-29 to 1997-01-28 and in precise ephemeris from 1994-01-02 to 1996-09-28. | |
| <i>Anchor definition</i> | Defined through coordinates of 10 GPS tracking stations adjusted to a subset of ITRF92 stations at epoch 1994.0. The reference epoch for ITRF92 is 1988.0; the station coordinates were propagated to 1994.0 using the NNR-NUVEL-1 plate motion model. | |
| <i>Release date</i> | 1994-06-29 | |
| <i>Coordinate Reference Epoch</i> | 1994.0 | |
| <i>Scope</i> | Spatial Referencing and GPS satellite navigation | |
| <i>Ellipsoid</i> | WGS 84 | |
| <i>Prime Meridian</i> | Greenwich | |

Extent

| | | |
|--------------------------------|-----------------------------|--------|
| <i>Description</i> | World. | |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | -180.0 |
| | <i>North-bound latitude</i> | 90.0 |
| | <i>East-bound longitude</i> | 180.0 |
| | <i>South-bound latitude</i> | -90.0 |

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|---------------------------|--|
| <i>Item class</i> | Ellipsoid |
| <i>Name</i> | WGS 84 |
| <i>Item status</i> | VALID |
| <i>Identifier</i> | 30 |
| <i>Alias</i> | WGS84 |
| <i>Information source</i> | <p><i>Title</i> Department of Defense World Geodetic System 1984: Its Definition and Relationships with Local Geodetic Systems, Version 1.0.0</p> <p><i>Author</i> National Geospatial-Intelligence Agency</p> <p><i>Publisher</i> National Geospatial-Intelligence Agency</p> <p><i>Publication date</i> 2014-07-08</p> <p><i>Series/Journal name</i> Standardization Document</p> <p><i>Issue identification</i> NGA.STND.0036_1.0.0_WGS84</p> |
| <i>Information source</i> | <p><i>Title</i> World Geodetic System 1984</p> <p><i>Author</i> L.B. Decker, Defense Mapping Agency Aerospace Center</p> <p><i>Publisher</i> Defense Mapping Agency Aerospace Center</p> <p><i>Publication date</i> 1986-04</p> <p><i>Edition date</i></p> |
| <i>Information source</i> | <p><i>Title</i> Refinements to The World Geodetic System 1984</p> <p><i>Author</i> S. Malys, J.A. Slater, R.W. Smith, L.E. Kunz, S.C. Kenyon</p> <p><i>Publisher</i> Institute of Navigation</p> <p><i>Publication date</i> 1997-09</p> <p><i>Edition date</i></p> <p><i>Series/Journal name</i> Proceedings of the 10th International Technical Meeting of the Satellite Division of The Institute of Navigation (ION-GPS-1997), Kansas City, MO, September 1997</p> <p><i>Page</i> 841-850</p> |
| <i>Data source</i> | ISO Geodetic Registry |
| <i>Remarks</i> | The World Geodetic System 1984 (WGS 84) contains four defining physical parameters for the Earth: the semi-major axis (a), the reciprocal of flattening (1/f) of an oblate spheroid of revolution, the geocentric gravitational constant ($GM = 3.986004418 \times 10^{14} \text{ m}^3/\text{s}^2$) includes the mass of the atmosphere, and the Earth's angular rotational velocity about its spin axis ($\omega = 7.2921150 \times 10^{-5} \text{ rad/s}$). |
| <i>Semi-major axis</i> | 6378137.0 m |
| <i>Inverse flattening</i> | 298.2572236 m |

ISO Geodetic Registry

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|----------------------------|-------------------------------|---|
| <i>Item class</i> | PrimeMeridian | |
| <i>Name</i> | Greenwich | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 25 | |
| <i>Alias</i> | Zero meridian | |
| <i>Information source</i> | <i>Title</i> | Why the Greenwich meridian moved |
| | <i>Author</i> | S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan |
| | <i>Publisher</i> | Springer International Publishing |
| | <i>Publication date</i> | 2015-12 |
| | <i>Series/Journal name</i> | Journal of Geodesy |
| | <i>Issue identification</i> | Volume 89, No. 12 |
| | <i>Page</i> | 1263–1272 |
| | <i>Title</i> | IERS Conventions (2010) |
| | <i>Author</i> | G. Petit, B.J. Luzum (eds) |
| | <i>Publisher</i> | Verlag des Bundesamts für Kartographie und Geodäsie |
| <i>Information source</i> | <i>Publication date</i> | 2010 |
| | <i>Edition date</i> | |
| | <i>Series/Journal name</i> | IERS Technical Notes |
| | <i>Issue identification</i> | 36.0 |
| | <i>Other citation details</i> | ISSN: 1019-4568 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Greenwich longitude</i> | 0.0 ° | |

ISO Geodetic Registry

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|---------------------------|---|---|
| <i>Item class</i> | EllipsoidalCS | |
| <i>Name</i> | Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 43 | |
| <i>Information source</i> | <i>Title</i> | ISO 19111 Geographical information - Spatial referencing by coordinates |
| | <i>Author</i> | International Organization for Standardization (ISO) |
| | <i>Publisher</i> | International Organization for Standardization (ISO) |
| | <i>Publication date</i> | 2007-07-01 |
| | <i>Edition</i> | Second Edition |
| | <i>Series/Journal name</i> | International Standard |
| | <i>Issue identification</i> | ISO 19111:2007 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Used in geographic 2D coordinate reference systems. Coordinates referenced to this CS are in degrees. Any degree representation (e.g. DMSH, decimal, etc.) may be used but that used must be declared for the user by the supplier of data. | |

Axes

| | | |
|---------------------------|---|---|
| <i>Item class</i> | CoordinateSystemAxis | |
| <i>Name</i> | Geodetic latitude | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 38 | |
| <i>Information source</i> | <i>Title</i> | ISO 19111 Geographical information - Spatial referencing by coordinates |
| | <i>Author</i> | International Organization for Standardization (ISO) |
| | <i>Publisher</i> | International Organization for Standardization (ISO) |
| | <i>Publication date</i> | 2007-07-01 |
| | <i>Edition</i> | Second Edition |
| | <i>Series/Journal name</i> | International Standard |
| | <i>Issue identification</i> | ISO 19111:2007 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Used in geographic 2D and geographic 3D coordinate reference systems. | |
| <i>Abbreviation</i> | Lat | |
| <i>Direction</i> | north | |
| <i>Unit</i> | degree (supplier to define representation) | |

| | | |
|---------------------------|---------------------------|---|
| <i>Item class</i> | CoordinateSystemAxis | |
| <i>Name</i> | Geodetic longitude | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 34 | |
| <i>Information source</i> | <i>Title</i> | ISO 19111 Geographical information - Spatial referencing by coordinates |
| | <i>Author</i> | International Organization for Standardization (ISO) |

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|---------------------|-----------------------------|---|
| | <i>Publisher</i> | International Organization for Standardization (ISO) |
| | <i>Publication date</i> | 2007-07-01 |
| | <i>Edition</i> | Second Edition |
| | <i>Series/Journal name</i> | International Standard |
| | <i>Issue identification</i> | ISO 19111:2007 |
| <i>Data source</i> | | ISO Geodetic Registry |
| <i>Remarks</i> | | Used in geographic 2D and geographic 3D coordinate reference systems. |
| <i>Abbreviation</i> | | Lon |
| <i>Direction</i> | | east |
| <i>Unit</i> | | degree (supplier to define representation) |