

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS	
<i>Name</i>	<b>IGS05 - XYZ</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	310	
<i>Alias</i>	International GNSS Service 2005	
<i>Information source</i>	<i>Title</i>	Proposed IGS05 Realization
	<i>Author</i>	R. Ferland
	<i>Publisher</i>	International GNSS Service (IGS)
	<i>Publication date</i>	2006-10-19
	<i>Edition date</i>	
	<i>Series/Journal name</i>	IGSMail
	<i>Issue identification</i>	5447.0
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Replaces IGB00 - XYZ. Replaced by IGS08 - XYZ. Used by IGS products within the period 2006-11-05 thru 2011-04-16.	
<i>Scope</i>	Spatial referencing	
<i>Datum</i>	IGS05	
<i>Coordinate System</i>	Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian   Y in the equatorial plane at the Prime Meridian]. UoM: m.	

## Extent

<i>Description</i>	<b>World.</b>	
<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

<i>Item class</i>	GeodeticDatum	
<i>Name</i>	<b>IGS05</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	202	
<i>Alias</i>	International GNSS Service 2005	
<i>Information source</i>	<i>Title</i>	Chronology of IGS Reference Frame Usage
	<i>Author</i>	International GNSS Service Analysis Centre Coordinator
	<i>Publisher</i>	National Oceanic and Atmospheric Administration (NOAA), National Geodetic Survey (NGS)
	<i>Publication date</i>	2012-10-04
	<i>Other citation details</i>	Website
<i>Information source</i>	<i>Title</i>	IGS switch to absolute antenna model and ITRF2005
	<i>Author</i>	Remi Ferland
	<i>Publisher</i>	International GNSS Service (IGS)
	<i>Publication date</i>	2006-10-09
	<i>Series/Journal name</i>	IGSMail
<i>Information source</i>	<i>Issue identification</i>	5438.0
	<i>Title</i>	Proposed IGS05 Realization
	<i>Author</i>	R. Ferland
	<i>Publisher</i>	International GNSS Service (IGS)
	<i>Publication date</i>	2006-10-19
<i>Information source</i>	<i>Edition date</i>	
	<i>Series/Journal name</i>	IGSMail
	<i>Issue identification</i>	5447.0
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Replaces IGB00. Replaced by IGS08. Used by IGS products within the period 2006-11-05 thru 2011-04-16.	
<i>Anchor definition</i>	Derived from and aligned to a subset of 139 stable IGS station coordinates and velocities in ITRF2005 at epoch 2000.0. The first IGS reference frame to use absolute antenna phase calibrations for both ground stations and satellite antennas.	
<i>Release date</i>	2006-11-05	
<i>Coordinate Reference Epoch</i>	2000.0	
<i>Scope</i>	Spatial Referencing	
<i>Ellipsoid</i>	GRS 1980	
<i>Prime Meridian</i>	Greenwich	

## Extent

<i>Description</i>	<b>World.</b>	
<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

<i>Item class</i>	Ellipsoid														
<i>Name</i>	<b>GRS 1980</b>														
<i>Item status</i>	VALID														
<i>Identifier</i>	27														
<i>Alias</i>	Geodetic Reference System 1980														
<i>Alias</i>	GRS1980														
<i>Alias</i>	IAG GRS80														
<i>Alias</i>	International 1979														
<i>Alias</i>	GRS80														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>Springer International Publishing</td></tr> <tr> <td><i>Publication date</i></td><td>2003-03</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Journal of Geodesy</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 74, No. 1</td></tr> <tr> <td><i>Page</i></td><td>128–162</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	Springer International Publishing	<i>Publication date</i>	2003-03	<i>Series/Journal name</i>	Journal of Geodesy	<i>Issue identification</i>	Volume 74, No. 1	<i>Page</i>	128–162
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	Springer International Publishing														
<i>Publication date</i>	2003-03														
<i>Series/Journal name</i>	Journal of Geodesy														
<i>Issue identification</i>	Volume 74, No. 1														
<i>Page</i>	128–162														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>International Association of Geodesy</td></tr> <tr> <td><i>Publication date</i></td><td>1984</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Bulletin Geodesique</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 58, No. 3</td></tr> <tr> <td><i>Page</i></td><td>395-405</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	International Association of Geodesy	<i>Publication date</i>	1984	<i>Series/Journal name</i>	Bulletin Geodesique	<i>Issue identification</i>	Volume 58, No. 3	<i>Page</i>	395-405
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	International Association of Geodesy														
<i>Publication date</i>	1984														
<i>Series/Journal name</i>	Bulletin Geodesique														
<i>Issue identification</i>	Volume 58, No. 3														
<i>Page</i>	395-405														
<i>Data source</i>	ISO Geodetic Registry														
<i>Remarks</i>	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant $GM = 3986005e8 \text{ m}^3/\text{s}^2$ , dynamic form factor $J_2 = 108263e-8$ and Earth's angular velocity = $7292115e-11 \text{ rad/s}$ .														
<i>Semi-major axis</i>	6378137.0 m														
<i>Inverse flattening</i>	298.257222101 m														

# ISO Geodetic Registry

<i>Item class</i>	PrimeMeridian	
<i>Name</i>	<b>Greenwich</b>	
<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 fur Kartographie und Geodasie
<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

Item class	CartesianCS	
Name	<b>Geocentric 3D right-handed Cartesian CS.</b> <b>Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian   X in the equatorial plane at the Prime Meridian]. UoM: m.</b>	
Item status	VALID	
Identifier	45	
Alias	Earth centred, earth fixed, right-handed 3D coordinate system, consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing towards North Pole. UoM: m.	
Alias	ECEF	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Remarks	Used in geocentric coordinate reference systems.	

## Axes

Item class	CoordinateSystemAxis	
Name	<b>Geocentric X</b>	
Item status	VALID	
Identifier	33	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	X	
Direction	Geocentre > equator/0°E	
Unit	metre	

Item class	CoordinateSystemAxis	
Name	<b>Geocentric Y</b>	
Item status	VALID	
Identifier	37	

<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>Abbreviation</i>	Y	
<i>Direction</i>	Geocentre > equator/90°E	
<i>Unit</i>	metre	

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Geocentric Z</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	39	
<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>Abbreviation</i>	Z	
<i>Direction</i>	Geocentre > north pole	
<i>Unit</i>	metre	