

# ISO Geodetic Registry

Item class	GeodeticCRS		
Name	SIRGAS2000 - LatLonEHt		
Item status	VALID		
Identifier	313		
Alias	SIRGAS 2000		
Alias	Geocentric Reference System for the Americas		
Alias	SIRGAS2000		
Alias	Sistema de Referencia Geocentrico para las Americas		
Alias	South American Geocentric Reference System 2000		
Alias	Geocentric Reference System for South America		
Information source	Title	Results of the SIRGAS campaign 2000 and coordinates variations with respect to the 1995 South American geocentric reference frame	
	Author	H. Drewes, K. Kaniuth, C. Voelksen, S.M. Alves Costa, L.P. Souto Fortes	
	Publisher	Springer Berlin Heidelberg	
	Publication date	2005	
	Series/Journal name	International Association of Geodesy Symposia	
	Issue identification	128.0	
	Page	32-37	
Information source	Title	Deformation of the South American crust estimated from finite element and collocation methods	
	Author	H. Drewes, O. Heidbach	
	Publisher	Springer Berlin Heidelberg	
	Publication date	2005	
	Series/Journal name	International Association of Geodesy Symposia	
	Issue identification	128.0	
	Page	544-549	
Information source	Other citation details	In Sanso F. (eds) A Window on the Future of Geodesy. International Association of Geodesy Symposia, Vol 128. Springer, Berlin, Heidelberg	
	Title	Sistema de Referencia Geocentrico para las Americas (SIRGAS)	
	Author	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)	
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)	
	Publication date	2018	
	Other citation details	Website	
	Data source	ISO Geodetic Registry	
Scope	Spatial referencing		
Datum	Sistema de Referencia Geocentrico para America del Sur 2000		
Coordinate System	Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.		

## Extent

<i>Description</i>	<b>South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.</b>	
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	-122.19

<i>North-bound latitude</i>	32.72
<i>East-bound longitude</i>	-25.28
<i>South-bound latitude</i>	-59.87

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<i>Item class</i>	GeodeticDatum																
<i>Name</i>	<b>Sistema de Referencia Geocentrico para America del Sur 2000</b>																
<i>Item status</i>	VALID																
<i>Identifier</i>	169																
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<i>Alias</i>	Geocentric Reference System for the Americas																
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<i>Page</i>	32-37																
<i>Data source</i>	ISO Geodetic Registry																
<i>Remarks</i>	Name changed from "South American Geocentric Reference System" to "Geocentric Reference System of the Americas" in 2001. Replaces SIRGAS95. Replaced by DGF00P01 for continuous stations in some SIRGAS countries.																
<i>Anchor definition</i>	Realized by a frame of 184 continuously operating and campaign stations using GPS observations from ten days in May 2000 and aligned to ITRF2000 at epoch 2000.4. Velocity model VEMOS2003 used to propagate coordinates from an arbitrary epoch to the 2000.4 reference epoch.																
<i>Release date</i>	2005																
<i>Coordinate Reference Epoch</i>	2000.4																
<i>Scope</i>	Spatial referencing																

<i>Ellipsoid</i>	GRS 1980
<i>Prime Meridian</i>	Greenwich

## Extent

<i>Description</i>	<b>South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.</b>		
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	-122.19	
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	<i>East-bound longitude</i>	-25.28	
	<i>South-bound latitude</i>	-59.87	

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<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														
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<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														

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<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>Information source</i>	<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>Publication date</i>	2010
	<i>Edition date</i>	
	<i>Series/Journal name</i>	IERS Technical Notes
	<i>Issue identification</i>	36.0
<i>Data source</i>	<i>Other citation details</i>	ISSN: 1019-4568
	ISO Geodetic Registry	
<i>Greenwich longitude</i>	0.0 °	

# ISO Geodetic Registry

<i>Item class</i>	EllipsoidalCS	
<i>Name</i>	<b>Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	46	
<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 3D coordinate reference systems. Horizontal 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.	

## Axes

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Geodetic latitude</b>	
<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>	<b>Geodetic longitude</b>	
<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)

	<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)	

  

<i>Item class</i>	CoordinateSystemAxis	
<i>Name</i>	<b>Ellipsoidal height</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	36	
<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 only as part of an ellipsoidal 3D coordinate system in a geographic 3D coordinate reference system, never on its own.	
<i>Abbreviation</i>	h	
<i>Direction</i>	up	
<i>Unit</i>	metre	