

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS																
<i>Name</i>	<b>SIRGAS-CON SIR13P01 - LatLon</b>																
<i>Item status</i>	VALID																
<i>Identifier</i>	240																
<i>Alias</i>	SIRGAS																
<i>Alias</i>	SIRGAS Multi-Year Solution 2013																
<i>Alias</i>	SIRGAS-CON																
<i>Alias</i>	SIR13P01																
<i>Alias</i>	Geocentric Reference System for the Americas																
<i>Alias</i>	Sistema de Referencia Geocentrico para las Americas																
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<i>Publication date</i>	2018																
<i>Other citation details</i>	Website																
<i>Data source</i>	ISO Geodetic Registry																
<i>Scope</i>	Spatial referencing																
<i>Datum</i>	SIRGAS Continuously Operating Network SIR13P01																
<i>Coordinate System</i>	Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree																

## 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

*South-bound latitude*

-59.87

# ISO Geodetic Registry

<i>Item class</i>	GeodeticDatum
<i>Name</i>	<b>SIRGAS Continuously Operating Network SIR13P01</b>
<i>Item status</i>	VALID
<i>Identifier</i>	177
<i>Alias</i>	SIRGAS
<i>Alias</i>	SIRGAS Multi-Year Solution 2013
<i>Alias</i>	SIRGAS-CON
<i>Alias</i>	SIR13P01
<i>Alias</i>	Geocentric Reference System for the Americas
<i>Alias</i>	Sistema de Referencia Geocentrico para las Americas
<i>Information source</i>	<p><i>Title</i> The 2009 Horizontal Velocity Field for South America and the Caribbean</p> <p><i>Author</i> H. Drewes, O. Heidbach</p> <p><i>Publisher</i> Springer Berlin Heidelberg</p> <p><i>Publication date</i> 2012</p> <p><i>Series/Journal name</i> International Association of Geodesy Symposia</p> <p><i>Issue identification</i> 136.0</p> <p><i>Page</i> 657-664</p> <p><i>Other citation details</i> In Kenyon S., Pacino M., Marti U. (eds) Geodesy for Planet Earth. International Association of Geodesy Symposia, Vol 136. Springer, Berlin, Heidelberg</p>
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<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Replaces SIR11P01. Replaced by SIR14P01. First multi-year solution after the El Maule earthquake of February 2010.
<i>Anchor definition</i>	Realized by a frame of 108 continuously operating stations using GPS observations from April 2010 to June 2013 and aligned to IGB08 at epoch 2012.0. Weekly normal equations from April 2010 to April 2011 were reprocessed using the second reprocessing campaign products (IG2) of the International GNSS Service and absolute phase centre calibrations referring to the IGS08 reference frame. Velocity model VEMOS2009 used to propagate coordinates from an arbitrary epoch to the 2012.0 reference epoch.
<i>Release date</i>	2013
<i>Coordinate Reference Epoch</i>	2012.0
<i>Scope</i>	Spatial referencing
<i>Ellipsoid</i>	GRS 1980

Prime Meridian	Greenwich
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Extent

Description	<b>South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.</b>		
Geographic Bounding Box	West-bound longitude	-122.19	
	North-bound latitude	32.72	
	East-bound longitude	-25.28	
	South-bound latitude	-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>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														

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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>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

<i>Item class</i>	EllipsoidalCS	
<i>Name</i>	<b>Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree</b>	
<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>	<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)	