

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS	
<i>Name</i>	<b>SIRGAS-CON SIR17P01 - LatLon</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	396	
<i>Alias</i>	SIRGAS	
<i>Alias</i>	SIRGAS-CON	
<i>Alias</i>	SIRGAS Multi-Year Solution 2017	
<i>Alias</i>	Geocentric Reference System for the Americas	
<i>Alias</i>	Sistema de Referencia Geocentrico para las Americas	
<i>Alias</i>	SIR17P01	
<i>Information source</i>	<i>Title</i>	Velocity model for SIRGAS 2017: VEMOS2017
	<i>Author</i>	L. Sanchez, H. Drewes
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2018-08-14
	<i>Other citation details</i>	In supplement to: Drewes H. and Sanchez L. (2017) The varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017, Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
<i>Information source</i>	<i>Title</i>	Kinematics of the SIRGAS reference frame
	<i>Author</i>	L. Sanchez
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2017-11-28
	<i>Series/Journal name</i>	Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
<i>Information source</i>	<i>Other citation details</i>	Data for paper included in supplement: Sanchez L. (2017) SIRGAS reference frame realization SIR17P01, Technische Universitaet Muenchen, Deutsches Geodaetisches Forschungsinstitut DGFI-TUM, IGS RNAAC SIRGAS
	<i>Title</i>	SIRGAS reference frame realization SIR17P01
	<i>Author</i>	L. Sanchez
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2018-08-14
<i>Information source</i>	<i>Other citation details</i>	In supplement to: Sanchez L. (2017) Kinematics of the SIRGAS reference frame, Symposium SIRGAS2018. Mendoza, Argentina. November 28, 2017
	<i>Title</i>	Sistema de Referencia Geocentrico para las Americas (SIRGAS)
	<i>Author</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2018
<i>Information source</i>	<i>Other citation details</i>	Website
	<i>Title</i>	The varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017
	<i>Author</i>	L. Sanchez, H. Drewes
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2017-11-28

	<i>Series/Journal name</i> Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
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<i>Data source</i>	ISO Geodetic Registry
<i>Scope</i>	Spatial referencing
<i>Datum</i>	SIRGAS Continuously Operating Network SIR17P01
<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
	<i>South-bound latitude</i>		-59.87

# ISO Geodetic Registry

<i>Item class</i>	GeodeticDatum	
<i>Name</i>	<b>SIRGAS Continuously Operating Network SIR17P01</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	129	
<i>Alias</i>	SIRGAS	
<i>Alias</i>	SIRGAS-CON	
<i>Alias</i>	SIRGAS Multi-Year Solution 2017	
<i>Alias</i>	Geocentric Reference System for the Americas	
<i>Alias</i>	Sistema de Referencia Geocentrico para las Americas	
<i>Alias</i>	SIR17P01	
<i>Information source</i>	<i>Title</i>	Velocity model for SIRGAS 2017: VEMOS2017
	<i>Author</i>	L. Sanchez, H. Drewes
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publication date</i>	2018-08-14
	<i>Other citation details</i>	In supplement to: Drewes H. and Sanchez L. (2017) The varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017, Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
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	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
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	<i>Title</i>	Sistema de Referencia Geocentrico para las Americas (SIRGAS)
	<i>Author</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	<i>Publisher</i>	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
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<i>Information source</i>	<p><i>Title</i> SIRGAS reference frame realization SIR17P01</p> <p><i>Author</i> L. Sanchez</p> <p><i>Publisher</i> Sistema de Referencia Geocéntrico para las Américas (SIRGAS)</p> <p><i>Publication date</i> 2018-08-14</p> <p><i>Other citation details</i> In supplement to: Sanchez L. (2017) Kinematics of the SIRGAS reference frame, Symposium SIRGAS2018. Mendoza, Argentina. November 28, 2017</p>
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Replaces SIR15P01.
<i>Anchor definition</i>	Realized by a frame of 345 continuously operating stations using GPS and GLONASS observations from April 2011 to January 2017 and aligned to IGS14 at epoch 2015.0. This cumulative solution has been made consistent with the phase centre calibrations referring to the IGS14 reference frame using the latitude-dependent phase centre correction model by the International GNSS Service. Velocity model VEMOS2017 used to propagate coordinates from an arbitrary epoch to the 2015.0 reference epoch.
<i>Release date</i>	2018
<i>Coordinate Reference Epoch</i>	2015.0
<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
	<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>	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														
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<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
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<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														

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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 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)