ISO Geodetic Registry

Item class	GeodeticCRS
Name	**SIRGAS-CON SIR11P01 - LatLon**
Item status	VALID
Identifier	307
Alias	SIRGAS
Alias	SIRGAS-CON
Alias	SIRGAS Multi-Year Solution 2011
Alias	Geocentric Reference System for the Americas
Alias	Sistema de Referencia Geocentrico para las Americas
Alias	SIR11P01

Information source	*Title*	The 2009 Horizontal Velocity Field for South America and the Caribbean
	Author	H. Drewes, O. Heidbach
	Publisher	Springer Berlin Heidelberg
	Publication date	2012
	Series/Journal name	International Association of Geodesy Symposia
	Issue identification	136.0
	Page	657-664
	Other citation details	In Kenyon S., Pacino M., Marti U. (eds) Geodesy for Planet Earth. International Association of Geodesy Symposia, Vol 136. Springer, Berlin, Heidelberg
Information source	*Title*	Recent activities of the IGS Regional Network Associate Analysis Centre for SIRGAS (IGS RNAAC SIR)
	Author	L. Sanchez, M. Seitz
	Publisher	Deutsches Geodaetisches Forschungsinstitut, Munich, Germany, PANGAEA
	Publication date	2011
	Series/Journal name	DGFI Report
	Issue identification	No. 87
	Other citation details	Data for paper included in supplement SIRGAS reference frame realization SIR11P01.
Information source	*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	SIRGAS Continuously Operating Network SIR11P01
Coordinate System	Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree

Extent

Description	**South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.**

Geographic Bounding Box	West-bound longitude	-122.19
	North-bound latitude	32.72
	East-bound longitude	-25.28
	South-bound latitude	-59.87

Item class	GeodeticDatum	
Name	**SIRGAS Continuously Operating Network SIR11P01**	
Item status	VALID	
Identifier	174	
Alias	SIRGAS	
Alias	SIRGAS-CON	
Alias	SIRGAS Multi-Year Solution 2011	
Alias	Geocentric Reference System for the Americas	
Alias	Sistema de Referencia Geocentrico para las Americas	
Alias	SIR11P01	
Information source	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
Information source	Title	The 2009 Horizontal Velocity Field for South America and the Caribbean
	Author	H. Drewes, O. Heidbach
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Information source	Title	Recent activities of the IGS Regional Network Associate Analysis Centre for SIRGAS (IGS RNAAC SIR)
	Author	L. Sanchez, M. Seitz
	Publisher	Deutsches Geodaetisches Forschungsinstitut, Munich, Germany, PANGAEA
	Publication date	2011
	Series/Journal name	DGFI Report
	Issue identification	No. 87
	Other citation details	Data for paper included in supplement SIRGAS reference frame realization SIR11P01.
Data source	ISO Geodetic Registry	
Remarks	Replaces SIR10P01. Replaced by SIR13P01. Last multi-year solution without the effects of the El Maule earthquake in February 2010.	
Anchor definition	Realized by a frame of 230 continuously operating stations using GPS observations from January 2000 to April 2011 and aligned to ITRF2008 at epoch 2005.0. GPS data from January 2000 to November 2006 reprocessed using the first reprocessing campaign products (IG1) of the International GNSS Service and absolute phase centre calibrations referring to the IGS05/IGb05 reference frame. Velocity model VEMOS2009 used to propagate coordinates from an arbitrary epoch to the 2005.0 reference epoch.	
Release date	2011	

Coordinate Reference Epoch	2005.0
Scope	Spatial referencing
Ellipsoid	GRS 1980
Prime Meridian	Greenwich

Extent

Description	**South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.**	
Geographic Bounding Box	*West-bound longitude*	-122.19
	North-bound latitude	32.72
	East-bound longitude	-25.28
	South-bound latitude	-59.87

ISO Geodetic Registry

Item class	Ellipsoid
Name	**GRS 1980**
Item status	VALID
Identifier	27
Alias	Geodetic Reference System 1980
Alias	GRS1980
Alias	IAG GRS80
Alias	International 1979
Alias	GRS80
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* Springer International Publishing *Publication date* 2003-03 *Series/Journal name* Journal of Geodesy *Issue identification* Volume 74, No. 1 *Page* 128–162
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* International Association of Geodesy *Publication date* 1984 *Series/Journal name* Bulletin Geodesique *Issue identification* Volume 58, No. 3 *Page* 395-405
Data source	ISO Geodetic Registry
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.
Semi-major axis	6378137.0 m
Inverse flattening	298.257222101 m

ISO Geodetic Registry

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

Item class	EllipsoidalCS	
Name	**Ellipsoidal 2D CS. Axes: latitude, longitude. Orientations: north, east. UoM: degree**	
Item status	VALID	
Identifier	43	
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 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

Item class	CoordinateSystemAxis	
Name	**Geodetic latitude**	
Item status	VALID	
Identifier	38	
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 geographic 2D and geographic 3D coordinate reference systems.	
Abbreviation	Lat	
Direction	north	
Unit	degree (supplier to define representation)	

Item class	CoordinateSystemAxis	
Name	**Geodetic longitude**	
Item status	VALID	
Identifier	34	
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 geographic 2D and geographic 3D coordinate reference systems.	
Abbreviation	Lon	
Direction	east	
Unit	degree (supplier to define representation)	