ISO Geodetic Registry

Item class	GeodeticCRS	
Name	**SIRGAS-CON SIR17P01 - LatLonEHt**	
Item status	VALID	
Identifier	312	
Alias	SIRGAS	
Alias	SIRGAS-CON	
Alias	SIRGAS Multi-Year Solution 2017	
Alias	Geocentric Reference System for the Americas	
Alias	Sistema de Referencia Geocentrico para las Americas	
Alias	SIR17P01	
Information source	*Title*	The varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017
	Author	L. Sanchez, H. Drewes
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2017-11-28
	Series/Journal name	Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
	Other citation details	Data for paper included in supplement: Drewes H. and Sanchez L. (2017): Velocity model for SIRGAS 2017: VEMOS2017, Technische Universitaet Muenchen, Deutsches Geodaetisches Forschungsinstitut (DGFI-TUM), IGS RNAAC
Information source	*Title*	Velocity model for SIRGAS 2017: VEMOS2017
	Author	L. Sanchez, H. Drewes
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2018-08-14
	Other citation details	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
Information source	*Title*	SIRGAS reference frame realization SIR17P01
	Author	L. Sanchez
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2018-08-14
	Other citation details	In supplement to: Sanchez L. (2017) Kinematics of the SIRGAS reference frame, Symposium SIRGAS2018. Mendoza, Argentina. November 28, 2017
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*	Kinematics of the SIRGAS reference frame
	Author	L. Sanchez
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)

	Publication date	2017-11-28
	Series/Journal name	Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
	Other citation details	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
Data source	ISO Geodetic Registry	
Scope	Spatial referencing	
Datum	SIRGAS Continuously Operating Network SIR17P01	
Coordinate System	Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.	

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	GeodeticDatum	
Name	**SIRGAS Continuously Operating Network SIR17P01**	
Item status	VALID	
Identifier	129	
Alias	SIRGAS	
Alias	SIRGAS-CON	
Alias	SIRGAS Multi-Year Solution 2017	
Alias	Geocentric Reference System for the Americas	
Alias	Sistema de Referencia Geocentrico para las Americas	
Alias	SIR17P01	
Information source	*Title*	Velocity model for SIRGAS 2017: VEMOS2017
	Author	L. Sanchez, H. Drewes
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2018-08-14
	Other citation details	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
Information source	*Title*	Kinematics of the SIRGAS reference frame
	Author	L. Sanchez
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2017-11-28
	Series/Journal name	Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
	Other citation details	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
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 varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017
	Author	L. Sanchez, H. Drewes
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2017-11-28
	Series/Journal name	Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017
	Other citation details	Data for paper included in supplement: Drewes H. and Sanchez L. (2017): Velocity model for SIRGAS 2017: VEMOS2017, Technische Universitaet Muenchen, Deutsches Geodaetisches Forschungsinstitut (DGFI-TUM), IGS RNAAC

Information source	*Title*	SIRGAS reference frame realization SIR17P01
	Author	L. Sanchez
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2018-08-14
	Other citation details	In supplement to: Sanchez L. (2017) Kinematics of the SIRGAS reference frame, Symposium SIRGAS2018. Mendoza, Argentina. November 28, 2017
Data source	ISO Geodetic Registry	
Remarks	Replaces SIR15P01.	
Anchor definition	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.	
Release date	2018	
Coordinate Reference Epoch	2015.0	
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 °	

ISO Geodetic Registry

Item class	EllipsoidalCS	
Name	**Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.**	
Item status	VALID	
Identifier	46	
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 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

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)	

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