ISO Geodetic Registry

Item class	Transformation	
Name	**IGS14 to SIRGAS-CON SIR17P01 [SIRv1]**	
Item status	VALID	
Identifier	630	
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*	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*	Use of velocities in the processing of GNSS data
	Author	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publisher	Sistema de Referencia Geocéntrico para las Américas (SIRGAS)
	Publication date	2017
	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

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	
Remarks	Null reference frame transformation between IGS14 and SIRGAS-CON SIR17P01.	
Operation version	SIRv1	
Scope	Spatial referencing	
Operation accuracy	0.01 m	
Source CRS	IGS14 - LatLon	
Target CRS	SIRGAS-CON SIR15P01 - LatLon	
Operation method	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)	

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

Operation parameter values

X-axis translation	0.0 millimetre
Y-axis translation	0.0 millimetre
Z-axis translation	0.0 millimetre
X-axis rotation	0.0 milliarc-second
Y-axis rotation	0.0 milliarc-second
Z-axis rotation	0.0 milliarc-second
Scale difference	0.0 parts per billion
Rate of change of X-axis translation	0.0 millimetre per year
Rate of change of Y-axis translation	0.0 millimetre per year
Rate of change of Z-axis translation	0.0 millimetre per year
Rate of change of X-axis rotation	0.0 milliarc-second per year
Rate of change of Y-axis rotation	0.0 milliarc-second per year
Rate of change of Z-axis rotation	0.0 milliarc-second per year
Rate of change of scale difference	0.0 parts per billion per year
Time reference	2015.0 year

ISO Geodetic Registry

Item class	OperationMethod
Name	**Time-Dependent Position Vector Transformation (geocentric Cartesian domain)**
Item status	VALID
Identifier	82
Alias	Time-Dependent 7-Parameter Transformation
Alias	14-Parameter Transformation
Alias	Time-Dependent Position Vector Transformation
Data source	ISO Geodetic Registry
Remarks	Note the analogy with the rotation for the Time-dependent Coordinate Frame Transformation but beware of the differences! The Position Vector Transformation convention is used by IAG.
Formula	Geomatics Guidance Note No 7, part 2: Coordinate Conversions and Transformations including Formulas

Operation parameters

X-axis translation
Y-axis translation
Z-axis translation
X-axis rotation
Y-axis rotation
Z-axis rotation
Scale difference
Rate of change of X-axis translation
Rate of change of Y-axis translation
Rate of change of Z-axis translation
Rate of change of X-axis rotation
Rate of change of Y-axis rotation
Rate of change of Z-axis rotation
Rate of change of scale difference
Time reference