ISO Geodetic Registry

Item class	Transformation	
Name	**IGb08 to SIRGAS-CON SIR14P01 [SIRv1]**	
Item status	VALID	
Identifier	706	
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*	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*	Crustal deformation and surface kinematics after the 2010 earthquakes in Latin America
	Author	L. Sanchez, H. Drewes
	Publisher	Elsevier
	Publication date	2016
	Series/Journal name	Journal of Geodynamics
	Issue identification	102.0
	Page	2023-01-01
	Other citation details	Data for paper included in two supplements: Sanchez L., Drewes H (2016): SIR15P01: Multiyear solution for the SIRGAS Reference Frame, link to ZIP archive, PANGAEA, doi:10.1594/PANGAEA.862536; Sanchez L., Drewes H (2016): VEMOS2015: Velocity and deformation model for Latin America and the Caribbean, link to ZIP archive, PANGAEA, doi:10.1594/PANGAEA.863131.
Information source	*Title*	SIRGAS Regional Network Associate Analysis Center, Technical Report 2014
	Author	L. Sanchez
	Publisher	International GNSS Service
	Publication date	2015
	Series/Journal name	International GNSS Service Technical Report 2014
	Page	101-110
Data source	ISO Geodetic Registry	
Remarks	Null reference frame transformation between IGb08 and SIRGAS-CON SIR14P01.	
Operation version	SIRv1	
Scope	Spatial referencing	
Operation accuracy	0.01 m	
Source CRS	IGb08 - LatLon	
Target CRS	SIRGAS-CON SIR14P01 - 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

Time reference	2013.0 year
Rate of change of scale difference	0.0 parts per billion per year
Rate of change of Z-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 X-axis rotation	0.0 milliarc-second per year
Rate of change of Z-axis translation	0.0 millimetre per year
Rate of change of Y-axis translation	0.0 millimetre per year
Rate of change of X-axis translation	0.0 millimetre per year
Scale difference	0.0 parts per billion
Z-axis rotation	0.0 milliarc-second
Y-axis rotation	0.0 milliarc-second
X-axis rotation	0.0 milliarc-second
Z-axis translation	0.0 millimetre
Y-axis translation	0.0 millimetre
X-axis translation	0.0 millimetre

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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