## ISO Geodetic Registry

Item class Transformation

IGS14 to SIRGAS-CON SIR17P01 [SIRv1]

Item statusVALIDIdentifier630

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

		hore and offshore. Central nd offshore. Mexico - e.	
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