ISO Geodetic Registry

Item class Transformation

Name ITRF2000 to SIRGAS-CON DGF01P02 [SIRv1]

Item statusVALIDIdentifier652

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 Annual Report 2001 of IGS RNAAC SIR

Author W. Seemueller, H. Drewes Publisher International GPS Service

Publication date 2004

Series/Journal name IGS 2001-2002 Technical Reports

Issue identification JPL Publication 04-017

Page 285-290

Information source Title Deformation of the South American crust

estimated from finite element and collocation

methods

Author H. Drewes, O. Heidbach
Publisher Springer Berlin Heidelberg

Publication date 2005

Series/Journal name International Association of Geodesy Symposia

Issue identification 128.0 Page 544-549

Other citation details In Sanso F. (eds) A Window on the Future of

Geodesy. International Association of Geodesy Symposia, Vol 128. Springer, Berlin, Heidelberg

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 ITRF2000 and SIRGAS-

CON DGF01P02.

Operation version SIRv1

Scope Spatial referencing

Operation accuracy 0.01 m

Source CRS ITRF2000 - LatLon

Target CRS SIRGAS-CON DGF01P02 - LatLon

Operation method Time-Dependent Position Vector Transformation (geocentric Cartesian

domain)

Extent

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	1998.4 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

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