ISO Geodetic Registry

Item class Transformation

Name ITRF94 to SIRGAS95 [SIRv1]

Item statusVALIDIdentifier525

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 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 South American Geocentric Reference System:

Final Report, Working Groups I and II

Author SIRGAS Working Groups I and II

Publisher Instituto Brasileiro de Geografia e Estatistica

(IBGE), Rio de Janeiro, Brasil

Publication date 1997

Other citation details Report in both English and Spanish.

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 ITRF94 and SIRGAS95.

Operation version SIRv1

Scope Spatial referencing

Operation accuracy 0.01 m

Source CRS ITRF94 - LatLon
Target CRS SIRGAS95 - LatLon

Operation method Time-Dependent Position Vector Transformation (geocentric Cartesian

domain)

Extent

Description	South America - onshore and offshore	
Geographic Bounding Box	West-bound longitude	-113.21
	North-bound latitude	16.75
	East-bound longitude	-26.0

Operation parameter values

1995.4 year
0.0 parts per billion per year
0.0 milliarc-second per year
0.0 milliarc-second per year
0.0 milliarc-second per year
0.0 millimetre per year
0.0 millimetre per year
0.0 millimetre per year
0.0 parts per billion
0.0 milliarc-second
0.0 milliarc-second
0.0 milliarc-second
0.0 millimetre
0.0 millimetre
0.0 millimetre

ISO Geodetic Registry

Item class OperationMethod

Name Time-Dependent Position Vector

Transformation (geocentric Cartesian domain)

Item statusVALIDIdentifier82

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