| | ISO Geode | etic Registry | |
|---|---------------------------------|--|--|
| Item class | Transformation | | |
| Name | IGS05 to SIR | GAS-CON SIR09P01 [SIRv1] | |
| Item status | VALID | | |
| Identifier | 512 | | |
| Information source | Title | The position and velocity solution SIR09P01 of | |
| imornation source | TiuG | the IGS Regional Network Associate Analysis Centre for SIRGAS (IGS RNAAC SIR) | |
| | Author Publisher | W. Seemueller, M. Seitz, L. Sanchez, H. Drewes Deutsches Geodaetisches Forschungsinstitut, | |
| | Publication date | Munich, Germany 2009 | |
| | Series/Journal name | | |
| | Issue identification | No. 85 | |
| 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 - Website | |
| Information source | Other citation details Title | The new Multi-year Position and Velocity Solution | |
| imormation source | Tiue | SIR09P01 of the IGS Regional Network Associate Analysis Centre (IGS RNAAC SIR) | |
| | Author | W. Seemueller, L. Sanchez, M. Seitz | |
| | Publisher | Springer Berlin Heidelberg | |
| | Publication date | 2011 | |
| | | International Association of Geodesy Symposia | |
| | Issue identification | 136.0 675-680 | |
| Information source | Page Title | The 2009 Horizontal Velocity Field for South America and the Caribbean | |
| | Author | H. Drewes, O. Heidbach | |
| | Publisher | Springer Berlin Heidelberg | |
| | Publication date | 2012 | |
| | Issue identification | e International Association of Geodesy Symposia 136.0 | |
| | Page Other citation details | 657-664 s In Kenyon S., Pacino M., Marti U. (eds) Geodesy | |
| | other challon details | for Planet Earth. International Association of Geodesy Symposia, Vol 136. Springer, Berlin, | |
| Information source | Title | Heidelberg Use of velocities in the processing of GNSS data | |
| miornation source | Author | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) | |
| | Publisher | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) | |
| | Publication date | 2017 | |
| D = (= = = = = = = = = = = = = = = = = | Other citation details | | |
| Data source | - | ISO Geodetic Registry | |
| Remarks | SIR09P01. | Null reference frame transformation between IGS05 and SIRGAS-CON SIR09P01. SIRv1 | |
| Operation version | | | |
| Scope | • | Spatial referencing | |
| Operation accuracy | 0.01 m | | |
| Source CRS | IGS05 - LatLon | | |

| Target CRS | SIRGAS-CON SIR09P01 - 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 North-bound latitude East-bound longitude South-bound latitude | -122.19 32.72 -25.28 -59.87 |

Operation parameter values

| Time reference | 2005.0 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 |

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.

Geomatics Guidance Note No 7, part 2: Coordinate Conversions and

Transformations including Formulas

Operation parameters

X-axis translation

Formula

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