

ISO Geodetic Registry

| | | |
|---------------------------|---|---|
| <i>Item class</i> | Transformation | |
| <i>Name</i> | IGS14 to SIRGAS-CON SIR17P01 [SIRv1] | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 630 | |
| <i>Information source</i> | <i>Title</i> | Velocity model for SIRGAS 2017: VEMOS2017 |
| | <i>Author</i> | L. Sanchez, H. Drewes |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2018-08-14 |
| | <i>Other citation details</i> | 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 |
| <i>Information source</i> | <i>Title</i> | SIRGAS reference frame realization SIR17P01 |
| | <i>Author</i> | L. Sanchez |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2018-08-14 |
| | <i>Other citation details</i> | In supplement to: Sanchez L. (2017) Kinematics of the SIRGAS reference frame, Symposium SIRGAS2018. Mendoza, Argentina. November 28, 2017 |
| <i>Information source</i> | <i>Title</i> | The varying surface kinematics in Latin America: VEMOS 2009, 2015, and 2017 |
| | <i>Author</i> | L. Sanchez, H. Drewes |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2017-11-28 |
| | <i>Series/Journal name</i> | Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017 |
| | <i>Other citation details</i> | 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 |
| <i>Information source</i> | <i>Title</i> | Use of velocities in the processing of GNSS data |
| | <i>Author</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2017 |
| | <i>Other citation details</i> | Website |
| <i>Information source</i> | <i>Title</i> | Kinematics of the SIRGAS reference frame |
| | <i>Author</i> | L. Sanchez |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2017-11-28 |
| | <i>Series/Journal name</i> | Symposium SIRGAS2017. Mendoza, Argentina. November 28, 2017 |
| | <i>Other citation details</i> | 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 |

| | | |
|---------------------------|---|--|
| <i>Information source</i> | <i>Title</i> | Sistema de Referencia Geocentrico para las Americas (SIRGAS) |
| | <i>Author</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publisher</i> | Sistema de Referencia Geocéntrico para las Américas (SIRGAS) |
| | <i>Publication date</i> | 2018 |
| | <i>Other citation details</i> | Website |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Null reference frame transformation between IGS14 and SIRGAS-CON SIR17P01. | |
| <i>Operation version</i> | SIRv1 | |
| <i>Scope</i> | Spatial referencing | |
| <i>Operation accuracy</i> | 0.01 m | |
| <i>Source CRS</i> | IGS14 - LatLon | |
| <i>Target CRS</i> | SIRGAS-CON SIR15P01 - LatLon | |
| <i>Operation method</i> | Time-Dependent Position Vector Transformation (geocentric Cartesian domain) | |

Extent

| | | |
|--------------------------------|---|---------|
| <i>Description</i> | South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore. | |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | -122.19 |
| | <i>North-bound latitude</i> | 32.72 |
| | <i>East-bound longitude</i> | -25.28 |
| | <i>South-bound latitude</i> | -59.87 |

Operation parameter values

| | |
|---|--------------------------------|
| <i>X-axis translation</i> | 0.0 millimetre |
| <i>Y-axis translation</i> | 0.0 millimetre |
| <i>Z-axis translation</i> | 0.0 millimetre |
| <i>X-axis rotation</i> | 0.0 milliarc-second |
| <i>Y-axis rotation</i> | 0.0 milliarc-second |
| <i>Z-axis rotation</i> | 0.0 milliarc-second |
| <i>Scale difference</i> | 0.0 parts per billion |
| <i>Rate of change of X-axis translation</i> | 0.0 millimetre per year |
| <i>Rate of change of Y-axis translation</i> | 0.0 millimetre per year |
| <i>Rate of change of Z-axis translation</i> | 0.0 millimetre per year |
| <i>Rate of change of X-axis rotation</i> | 0.0 milliarc-second per year |
| <i>Rate of change of Y-axis rotation</i> | 0.0 milliarc-second per year |
| <i>Rate of change of Z-axis rotation</i> | 0.0 milliarc-second per year |
| <i>Rate of change of scale difference</i> | 0.0 parts per billion per year |
| <i>Time reference</i> | 2015.0 year |

ISO Geodetic Registry

| | |
|--------------------|--|
| <i>Item class</i> | OperationMethod |
| <i>Name</i> | Time-Dependent Position Vector Transformation (geocentric Cartesian domain) |
| <i>Item status</i> | VALID |
| <i>Identifier</i> | 82 |
| <i>Alias</i> | Time-Dependent 7-Parameter Transformation |
| <i>Alias</i> | 14-Parameter Transformation |
| <i>Alias</i> | Time-Dependent Position Vector Transformation |
| <i>Data source</i> | ISO Geodetic Registry |
| <i>Remarks</i> | 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. |
| <i>Formula</i> | Geomatics Guidance Note No 7, part 2: Coordinate Conversions and Transformations including Formulas |

Operation parameters

| |
|---|
| <i>X-axis translation</i> |
| <i>Y-axis translation</i> |
| <i>Z-axis translation</i> |
| <i>X-axis rotation</i> |
| <i>Y-axis rotation</i> |
| <i>Z-axis rotation</i> |
| <i>Scale difference</i> |
| <i>Rate of change of X-axis translation</i> |
| <i>Rate of change of Y-axis translation</i> |
| <i>Rate of change of Z-axis translation</i> |
| <i>Rate of change of X-axis rotation</i> |
| <i>Rate of change of Y-axis rotation</i> |
| <i>Rate of change of Z-axis rotation</i> |
| <i>Rate of change of scale difference</i> |
| <i>Time reference</i> |