

ISO Geodetic Registry

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|---------------------------|---|---|
| <i>Item class</i> | Transformation | |
| <i>Name</i> | ITRF94 to SIRGAS95 [SIRv1] | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 525 | |
| <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> | Deformation of the South American crust estimated from finite element and collocation methods |
| | <i>Author</i> | H. Drewes, O. Heidbach |
| | <i>Publisher</i> | Springer Berlin Heidelberg |
| | <i>Publication date</i> | 2005 |
| | <i>Series/Journal name</i> | International Association of Geodesy Symposia |
| | <i>Issue identification</i> | 128.0 |
| | <i>Page</i> | 544-549 |
| | <i>Other citation details</i> | In Sanso F. (eds) A Window on the Future of Geodesy. International Association of Geodesy Symposia, Vol 128. Springer, Berlin, Heidelberg |
| <i>Information source</i> | <i>Title</i> | South American Geocentric Reference System: Final Report, Working Groups I and II |
| | <i>Author</i> | SIRGAS Working Groups I and II |
| | <i>Publisher</i> | Instituto Brasileiro de Geografia e Estatística (IBGE), Rio de Janeiro, Brasil |
| | <i>Publication date</i> | 1997 |
| | <i>Other citation details</i> | Report in both English and Spanish. |
| <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 ITRF94 and SIRGAS95. | |
| <i>Operation version</i> | SIRv1 | |
| <i>Scope</i> | Spatial referencing | |
| <i>Operation accuracy</i> | 0.01 m | |
| <i>Source CRS</i> | ITRF94 - LatLon | |
| <i>Target CRS</i> | SIRGAS95 - LatLon | |
| <i>Operation method</i> | Time-Dependent Position Vector Transformation (geocentric Cartesian domain) | |

Extent

| | | |
|--------------------------------|---|---------|
| <i>Description</i> | South America - onshore and offshore | |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i> | -113.21 |
| | <i>North-bound latitude</i> | 16.75 |
| | <i>East-bound longitude</i> | -26.0 |

Operation parameter values

| | |
|---|--------------------------------|
| <i>Time reference</i> | 1995.4 year |
| <i>Rate of change of scale difference</i> | 0.0 parts per billion per year |
| <i>Rate of change of Z-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 X-axis rotation</i> | 0.0 milliarc-second per year |
| <i>Rate of change of Z-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 X-axis translation</i> | 0.0 millimetre per year |
| <i>Scale difference</i> | 0.0 parts per billion |
| <i>Z-axis rotation</i> | 0.0 milliarc-second |
| <i>Y-axis rotation</i> | 0.0 milliarc-second |
| <i>X-axis rotation</i> | 0.0 milliarc-second |
| <i>Z-axis translation</i> | 0.0 millimetre |
| <i>Y-axis translation</i> | 0.0 millimetre |
| <i>X-axis translation</i> | 0.0 millimetre |

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|--------------------|--|
| <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> |