# ISO Geodetic Registry

| | | |
|---|---|---|
| *Item class* | Transformation | |
| *Name* | **ITRF96 to NAD83(CSRS) v2 [v1]** | |
| *Item status* | VALID | |
| *Identifier* | 567 | |
| *Information source* | *Title* | The Canadian Spatial Reference System (CSRS) |
| | *Author* | Canadian Geodetic Survey |
| | *Publisher* | Canadian Geodetic Survey, Surveyor General Branch, Earth Sciences Sector, Natural Resources Canada, Government of Canada |
| | *Publication date* | 2016-08-30 |
| *Information source* | *Title* | The Evolution of NAD83 in Canada |
| | *Author* | M. Craymer |
| | *Publisher* | Canadian Institute of Geomatics |
| | *Publication date* | 2006 |
| | *Series/Journal name* | Geomatica |
| | *Issue identification* | Volume 60, No. 2 |
| | *Page* | 151-164 |
| *Information source* | *Title* | Realisation and Unification of NAD83 in Canada and the US via the ITRF |
| | *Author* | M. Craymer, R. Ferland, R. Snay |
| | *Publisher* | Springer, Berlin - Heidelberg |
| | *Publication date* | 2000 |
| | *Series/Journal name* | International Association of Geodesy Symposia |
| | *Issue identification* | Volume 120 |
| | *Page* | 118–121 |
| | *Other citation details* | In Rummel R., Drewes H., Bosch W., Hornik H. (eds) Towards an Integrated Global Geodetic Observing System (IGGOS). International Association of Geodesy Symposia, Vol 120. Springer, Berlin, Heidelberg |
| *Data source* | ISO Geodetic Registry | |
| *Remarks* | Transformation defines NAD83(CSRS)v2 and is treated as errorless. | |
| *Operation version* | v1 | |
| *Scope* | Spatial referencing | |
| *Operation accuracy* | 0.0 m | |
| *Source CRS* | ITRF96 - XYZ | |
| *Target CRS* | NAD83(CSRS) v2 - XYZ | |
| *Operation method* | Time-Dependent Position Vector Transformation (geocentric Cartesian domain) | |

## Extent

| | | |
|---|---|---|
| *Description* | **Canada - onshore and offshore - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan, Yukon.** | |
| *Geographic Bounding Box* | *West-bound longitude* | -141.01 |
| | *North-bound latitude* | 90.0 |
| | *East-bound longitude* | -47.74 |
| | *South-bound latitude* | 40.04 |

## Operation parameter values

| | |
|---|---|
| *Time reference* | 1997.0 year |
| *Rate of change of scale difference* | 0.0 parts per billion per year |
| *Rate of change of Z-axis rotation* | 0.0316 milliarc-second per year |
| *Rate of change of Y-axis rotation* | 0.7423 milliarc-second per year |
| *Rate of change of X-axis rotation* | -0.0532 milliarc-second per year |
| *Rate of change of Z-axis translation* | 0.0 metre per year |
| *Rate of change of Y-axis translation* | 0.0 metre per year |
| *Rate of change of X-axis translation* | 0.0 metre per year |
| *Scale difference* | 0.0 parts per billion |
| *Z-axis rotation* | -11.66 milliarc-second |
| *Y-axis rotation* | -9.65 milliarc-second |
| *X-axis rotation* | -25.79 milliarc-second |
| *Z-axis translation* | -0.5129 metre |
| *Y-axis translation* | -1.9072 metre |
| *X-axis translation* | 0.991 metre |

# 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* |