ISO Geodetic Registry

Item class	Transformation	
Name	**ITRF2014 to ITRF2020 [IERS v1]**	
Item status	VALID	
Identifier	817	
Information source	*Title*	Transformation parameters from ITRF2020 to past ITRFs
	Author	International Earth Rotation and Reference Systems Service (IERS)
	Publisher	Institut National de l'Information Geographique et Forestiere (IGN)
	Publication date	2022-04-15
	Other citation details	Webpage: https://itrf.ign.fr/docs/solutions/itrf2020/Transfo-ITRF2020_TRFs.txt (accessed 2022-04-25)
Data source	ISO Geodetic Registry	
Remarks	The IERS citation describes the transformation. Accuracy of transformation is given at the reference epoch for the transformation parameters. Accuracy at other epochs depends on the accuracies of the parameters at the reference epoch and their rates of change. Refer to citations for accuracies of the parameters and their rates of change.	
Operation version	IERS v1	
Scope	Spatial referencing	
Operation accuracy	0.001 m	
Source CRS	ITRF2014 - XYZ	
Target CRS	ITRF2020 - XYZ	
Operation method	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)	

Extent

Description	**World**	
Geographic Bounding Box	*West-bound longitude*	-180.0
	North-bound latitude	90.0
	East-bound longitude	180.0
	South-bound latitude	-90.0

Operation parameter values

X-axis translation	1.4 millimetre
Y-axis translation	0.9 millimetre
Z-axis translation	-1.4 millimetre
X-axis rotation	0.0 milliarc-second
Y-axis rotation	0.0 milliarc-second
Z-axis rotation	0.0 milliarc-second
Scale difference	0.42 parts per billion
Rate of change of X-axis translation	0.0 millimetre per year
Rate of change of Y-axis translation	0.1 millimetre per year
Rate of change of Z-axis translation	-0.2 millimetre per year
Rate of change of X-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 Z-axis rotation	0.0 milliarc-second per year
Rate of change of scale difference	0.0 millimetre per year
Time reference	2015.0 year

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