

# ISO Geodetic Registry

Item class	Transformation		
Name	ITRF93 to ITRF94 [IERS v1]		
Item status	VALID		
Identifier	579		
Information source	Title	IERS Conventions (2010)	
	Author	G. Petit, B.J. Luzum (eds)	
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie	
	Publication date	2010	
	Edition date		
	Series/Journal name	IERS Technical Notes	
	Issue identification	36.0	
	Other citation details	ISSN: 1019-4568	
	Information source	Title	IERS Conventions (1992)
Author		D.D. McCarthy	
Publisher		Central Bureau of IERS - Observatoire de Paris, 61 avenue de l'Observatoire, 75014 Paris, France	
Publication date		1996-07-01	
Edition date			
Series/Journal name		IERS Technical Notes	
Issue identification		21.0	
Data source		ISO Geodetic Registry	
Remarks		Citation describes the ITRF94 to ITRF93 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	0.01 m		
Source CRS	ITRF93 - XYZ		
Target CRS	ITRF94 - XYZ		
Operation method	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)		

## Extent

<i>Description</i>	<b>World.</b>		
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	-180.0	
	<i>North-bound latitude</i>	90.0	
	<i>East-bound longitude</i>	180.0	
	<i>South-bound latitude</i>	-90.0	

## Operation parameter values

<i>Time reference</i>	1988.0 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>	-0.05 milliarc-second per year
<i>Rate of change of Y-axis rotation</i>	0.19 milliarc-second per year
<i>Rate of change of X-axis rotation</i>	0.11 milliarc-second per year
<i>Rate of change of Z-axis translation</i>	-0.08 centimetre per year
<i>Rate of change of Y-axis translation</i>	-0.04 centimetre per year

<i>Rate of change of X-axis translation</i>	0.29 centimetre per year
<i>Scale difference</i>	-0.4 parts per billion
<i>Z-axis rotation</i>	0.96 milliarc-second
<i>Y-axis rotation</i>	-0.8 milliarc-second
<i>X-axis rotation</i>	0.39 milliarc-second
<i>Z-axis translation</i>	1.5 centimetre
<i>Y-axis translation</i>	0.5 centimetre
<i>X-axis translation</i>	-0.6 centimetre

# ISO Geodetic Registry

<i>Item class</i>	OperationMethod
<i>Name</i>	<b>Time-Dependent Position Vector Transformation (geocentric Cartesian domain)</b>
<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>