ISO Geodetic Registry

Item class Transformation

Name IGS05 to IGS08 [IGS v1]

Item statusVALIDIdentifier692

Information source Title Chronology of IGS Reference Frame Usage

Author International GNSS Service Analysis Centre

Coordinator

Publisher National Oceanic and Atmospheric Administration

(NOAA), National Geodetic Survey (NGS)

Publication date 2012-10-04 Other citation details Website

Information source Title Upcoming switch to IGS08/igs08.atx

Author P. Rebischung, R. Schmid, J. Ray Publisher International GNSS Service (IGS)

Publication date 2011-03-07

Edition date

Series/Journal name IGSMAIL Issue identification 6354.0

Information source Title IGS08: the IGS realization of ITRF2008

Author P. Rebischung
Publisher Springer
Publication date 2012-10-01

Edition date

Series/Journal name GPS Solutions
Issue identification Volume 16, Issue 4

Data source ISO Geodetic Registry

Remarks 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 IGS v1

Scope Spatial referencing

Operation accuracy 0.001 m

Source CRS IGS05 - XYZ

Target CRS IGS08 - 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

Time reference 2005.0 year

Rate of change of scale difference

Rate of change of Z-axis rotation

Rate of change of Y-axis rotation

O.01 parts per billion per year

0.001 milliarc-second per year

-0.003 milliarc-second per year

Rate of change of X-axis rotation	-0.002 milliarc-second per year	
Rate of change of Z-axis translation	-0.1 millimetre per year	
Rate of change of Y-axis translation	0.0 millimetre per year	
Rate of change of X-axis translation	-0.1 millimetre per year	
Scale difference	-1.04 parts per billion	
Z-axis rotation	0.014 milliarc-second	
Y-axis rotation	0.014 milliarc-second	
X-axis rotation	-0.012 milliarc-second	
Z-axis translation	5.8 millimetre	
Y-axis translation	0.0 millimetre	
X-axis translation	1.5 millimetre	

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