ISO Geodetic Registry

Item class Transformation

Name ITRF2014 to NAD 83 (MA11) Epoch 2010 [NGS

v1]

Item statusVALIDIdentifier986

Information source Title Multi-Year CORS Solution 2 (MYCS2)

Coordinates

AuthorU.S. National Geodetc Survey (NGS)PublisherNational Geodetc Survey (NGS), National

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mycs2/mycs2.shtml#htdp_params (accessed

2023-01-28)

Data source ISO Geodetic Registry

Remarks Transformation defines NAD 83 (MA11) with respect to ITRF2014 and

is treated as errorless.

Operation version NGS v1

Scope Spatial referencing

Operation accuracy 0.0 m

Source CRS ITRF2014 - XYZ

Target CRS NAD 83 (MA11) Epoch 2010 - XYZ

Operation method Time-Dependent Coordinate Frame Transformation (geocentric

Cartesian domain)

Extent

Description	Guam - onshore and offshore. Northern Mariana Islands - onshore and offshore. Palau - onshore and offshore.	
Geographic Bounding Box	West-bound longitude	129.48
	North-bound latitude	23.9
	East-bound longitude	149.55
	South-bound latitude	1.64

Operation parameter values

Time reference	2010.0 year	
Rate of change of scale difference	0.11 parts per billion per year	
Rate of change of Z-axis rotation	-0.347 milliarc-second per year	
Rate of change of Y-axis rotation	0.105 milliarc-second per year	
Rate of change of X-axis rotation	-0.02 milliarc-second per year	
Rate of change of Z-axis translation	-0.0019 metre per year	
Rate of change of Y-axis translation	1.0E-4 metre per year	
Rate of change of X-axis translation	1.0E-4 metre per year	
Scale difference	2.12 parts per billion	
Z-axis rotation	4.417 milliarc-second	
Y-axis rotation	11.785 milliarc-second	
X-axis rotation	28.711 milliarc-second	

Z-axis translation	-0.5863 metre
Y-axis translation	-2.0129 metre
X-axis translation	0.9109 metre

ISO Geodetic Registry

Item class OperationMethod

Name Time-Dependent Coordinate Frame

Transformation (geocentric Cartesian domain)

Item status VALID
Identifier 94

Alias Time-Dependent 7-Parameter Transformation

Alias 14-Parameter Transformation

Alias Time-Dependent Coordinate Frame Transformation

Data source ISO Geodetic Registry

Remarks Note the analogy with the Time-dependent Position Vector

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