

ISO Geodetic Registry

<i>Item class</i>	Transformation	
<i>Name</i>	ITRF2000 to NAD 83 (MARP00) [v1]	
<i>Item status</i>	VALID	
<i>Identifier</i>	738	
<i>Information source</i>	<i>Title</i>	Introducing Two Spatial Reference Frames for Regions of the Pacific Ocean
	<i>Author</i>	R.A. Snay
	<i>Publisher</i>	American Congress on Surveying and Mapping
	<i>Publication date</i>	2003-01-01
	<i>Edition</i>	
	<i>Edition date</i>	
	<i>Series/Journal name</i>	Surveying and Land Information Systems
	<i>Issue identification</i>	Volume 63, No. 1
	<i>Page</i>	5-12
	<i>Other citation details</i>	MARP00, PACP00. https://www.ngs.noaa.gov/PUBS_LIB/salis.pdf (accessed 2020-11-05)
<i>Information source</i>	<i>Title</i>	NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	<i>Author</i>	National Geodetic Survey
	<i>Publisher</i>	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	<i>Revision date</i>	2017-03-16
	<i>Edition</i>	
	<i>Edition date</i>	
	<i>Series/Journal name</i>	NGS Online listing of transformation parameters
	<i>Issue identification</i>	
	<i>Page</i>	
	<i>Other citation details</i>	Webpage https://www.ngs.noaa.gov/CORS/coord_info/coordtrans_no_support_tables.shtml (accessed 2020-11-05)
<i>Information source</i>	<i>Title</i>	Introducing HTDP 3.1 to transform coordinates across time and spatial reference frames
	<i>Author</i>	C. Pearson, R.A. Snay
	<i>Publisher</i>	Springer-Verlag
	<i>Publication date</i>	2013-01-01
	<i>Edition</i>	
	<i>Edition date</i>	2013-01-01
	<i>Series/Journal name</i>	GPS Solutions
	<i>Issue identification</i>	Volume 17, No. 1
	<i>Page</i>	1-15
	<i>Other citation details</i>	NAD83 (2011), NAD83 (MA11), NAD83 (PA11) transformation from IGB08. http://dx.doi.org/10.1007/s10291-012-0255-y (accessed 2020-11-05)
<i>Information source</i>	<i>Title</i>	Transforming positions and velocities between the International Terrestrial Reference Frame of 2000 and the North American Datum of 1983
	<i>Author</i>	T. Soler, R.A. Snay
	<i>Publisher</i>	American Society of Civil Engineers
	<i>Publication date</i>	2004-05
	<i>Edition</i>	
	<i>Edition date</i>	
	<i>Series/Journal name</i>	Journal of Surveying Engineering
	<i>Issue identification</i>	Volume 130, No. 2
	<i>Page</i>	49-55

	Other citation details http://dx.doi.org/10.1061/(ASCE)0733-9453(2004)130:2(49) (accessed 2020-11-05)
Data source	ISO Geodetic Registry
Remarks	Transformation defines NAD83(MA11) and is treated as errorless. Replaces and corrects rotations in invalidated item 547.
Operation version	v1
Scope	Spatial referencing
Operation accuracy	0.0 m
Source CRS	ITRF2000 - XYZ
Target CRS	NAD 83 (MARP00) - 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

X-axis translation	0.9102 metre
Y-axis translation	-2.0141 metre
Z-axis translation	-0.5602 metre
X-axis rotation	28.971 milliarc-second
Y-axis rotation	10.42 milliarc-second
Z-axis rotation	8.928 milliarc-second
Scale difference	0.0 parts per billion
Rate of change of X-axis translation	0.0 metre per year
Rate of change of Y-axis translation	0.0 metre per year
Rate of change of Z-axis translation	0.0 metre per year
Rate of change of X-axis rotation	-0.02 milliarc-second per year
Rate of change of Y-axis rotation	0.105 milliarc-second per year
Rate of change of Z-axis rotation	-0.347 milliarc-second per year
Rate of change of scale difference	0.0 parts per billion per year
Time reference	1997.0 year

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<i>Item class</i>	OperationMethod
<i>Name</i>	Time-Dependent Coordinate Frame Transformation (geocentric Cartesian domain)
<i>Item status</i>	VALID
<i>Identifier</i>	94
<i>Alias</i>	Time-Dependent 7-Parameter Transformation
<i>Alias</i>	14-Parameter Transformation
<i>Alias</i>	Time-Dependent Coordinate Frame Transformation
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Note the analogy with the Time-dependent Position Vector 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>