

# ISO Geodetic Registry

<i>Item class</i>	Transformation	
<i>Name</i>	<b>ITRF2000 to NAD 83 (MARP00) [v1]</b>	
<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. <a href="https://www.ngs.noaa.gov/PUBS_LIB/salis.pdf">https://www.ngs.noaa.gov/PUBS_LIB/salis.pdf</a> (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 <a href="https://www.ngs.noaa.gov/CORS/coord_info/coordtrans_no_support_tables.shtml">https://www.ngs.noaa.gov/CORS/coord_info/coordtrans_no_support_tables.shtml</a> (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. <a href="http://dx.doi.org/10.1007/s10291-012-0255-y">http://dx.doi.org/10.1007/s10291-012-0255-y</a> (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

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

## Extent

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

## Operation parameter values

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

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