ISO Geodetic Registry

Item class	GeodeticDatum	
Name	**World Geodetic System 1984 (G2139)**	
Item status	VALID	
Identifier	795	
Alias	WGS 84 (G2139)	
Information source	*Title*	Recent Update to WGS 84 Reference Frame and NGA Transition to IGS ANTEX
	Author	Office of Geomatics / GNSS Division, National Geospatial-Intelligence Agency
	Publisher	National Geospatial-Intelligence Agency
	Publication date	2021
	Series/Journal name	Public Release
	Issue identification	21-520
	Other citation details	https://earth-info.nga.mil/php/download.php?file=(U)WGS%2084(G2139).pdf (accessed 2021-09-24)
Information source	*Title*	Personal communication
	Author	Robert Wong
	Publisher	National Geospatial-Intelligence Agency
	Publication date	2021-10-25
	Series/Journal name	ISOGR Control Body Meeting
	Issue identification	2021-10-25
Data source	ISO Geodetic Registry	
Remarks	From 2021-01-03 replaces World Geodetic System 1984 (G1762), which has been redesignated World Geodetic System 1984 (G1762'). Tracking station coordinates changed on 2021-03-28 when NGA implemented the IGS definition of GPS satellite antenna phase centre offsets.	
Anchor definition	Defined through coordinates of 19 GPS tracking stations aligned to a subset of IGb14 stations at epoch 2016.0. The IGb14 station coordinates are considered to be equivalent to ITRF2014.	
Release date	2021-01-03	
Coordinate Reference Epoch	2016.0	
Scope	Spatial referencing and GPS satellite navigation	
Ellipsoid	WGS 84	
Prime Meridian	Greenwich	

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

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Item class	Ellipsoid	
Name	**WGS 84**	
Item status	VALID	
Identifier	30	
Alias	WGS84	
Information source	Title	Department of Defense World Geodetic System 1984: Its Definition and Relationships with Local Geodetic Systems, Version 1.0.0
	Author	National Geospatial-Intelligence Agency
	Publisher	National Geospatial-Intelligence Agency
	Publication date	2014-07-08
	Series/Journal name	Standardization Document
	Issue identification	NGA.STND.0036_1.0.0_WGS84
Information source	Title	World Geodetic System 1984
	Author	L.B. Decker, Defense Mapping Agency Aerospace Center
	Publisher	Defense Mapping Agency Aerospace Center
	Publication date	1986-04
	Edition date	
Information source	Title	Refinements to The World Geodetic System 1984
	Author	S. Malys, J.A. Slater, R.W. Smith, L.E. Kunz, S.C. Kenyon
	Publisher	Institute of Navigation
	Publication date	1997-09
	Edition date	
	Series/Journal name	Proceedings of the 10th International Technical Meeting of the Satellite Division of The Institue of Navigation (ION-GPS-1997), Kansas City, MO, September 1997
	Page	841-850
Data source	ISO Geodetic Registry	
Remarks	The World Geodetic System 1984 (WGS 84) contains four defining physical parameters for the Earth: the semi-major axis (a), the reciprocal of flattening (1/f) of an oblate spheroid of revolution, the geocentric gravitational constant (GM = 3.986004418e14 m^3/s^2) includes the mass of the atmosphere, and the Earth's angular rotational velocity about its spin axis (omega = 7.2921150e-5 rad/s).	
Semi-major axis	6378137.0 m	
Inverse flattening	298.2572236 m	

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Item class	PrimeMeridian	
Name	**Greenwich**	
Item status	VALID	
Identifier	25	
Alias	Zero meridian	
Information source	*Title*	Why the Greenwich meridian moved
	Author	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	Publisher	Springer International Publishing
	Publication date	2015-12
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 89, No. 12
	Page	1263–1272
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
Data source	ISO Geodetic Registry	
Greenwich longitude	0.0 °	