Item class GeodeticCRS

Name WGS 84 (G1150) - XYZ

Item statusVALIDIdentifier210

Information source Title Addendum to NIMA TR 8350.2: Implementation

of the World Geodetic System 1984 (WGS 84)

Reference Frame G1150

Author National Imagery and Mapping Agency
Publisher National Imagery and Mapping Agency

Publication date 2003

Edition date

Series/Journal name Technical Report

Issue identification TR8350.2

Information source Title A Refinement to the World Geodetic System 1984

Reference Frame

Author M. J. Merrigan, E.R. Swift, R.F. Wong, Saffel J.T.

Publisher Institute of Navigation

Publication date 2002-09

Edition date

Series/Journal name Proceedings of the 15th International Technical

Meeting of the Satellite Division of The Institue of Navigation (ION-GPS-2002), Portland, OR,

September 2002

Page 1519-1529

Data source ISO Geodetic Registry

Remarks Replaces WGS 84 (G873) - XYZ. Replaced by WGS 84 (G1674) - XYZ.

Scope Spatial Referencing and GPS satellite navigation.

Datum World Geodetic System 1984 (G1150)

Coordinate System Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z.

Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian \mid X in the equatorial plane at the Prime Meridian]. UoM:

m.

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

Item class GeodeticDatum

Name World Geodetic System 1984 (G1150)

Item status VALID Identifier 114

Alias WGS 84 (G1150)

Information source Title Affirmation of Vertical Datum for Surveying and

Mapping Activities for the Islands of Rota, Saipan and Tinian of the Commonwealth of the Northern

Mariana Islands (CNMI)

Author US Government

Publisher Office of Federal Register, NARA

Publication date 2009-01-22 Edition date 2009-01-22

Series/Journal name Federal Register Notice

Issue identification Volume 74, No. 13, Document: E9-1180, Citation:

74 FR 3990

Page 3990-3991

Other citation details Mandates use of NMVD03

Information source Title A Refinement to the World Geodetic System 1984

Reference Frame

Author M. J. Merrigan, E.R. Swift, R.F. Wong, Saffel J.T.

Publisher Institute of Navigation

Publication date 2002-09

Edition date

Series/Journal name Proceedings of the 15th International Technical

Meeting of the Satellite Division of The Institue of Navigation (ION-GPS-2002), Portland, OR,

September 2002

Page 1519-1529

Information source Title Addendum to NIMA TR 8350.2: Implementation

of the World Geodetic System 1984 (WGS 84)

Reference Frame G1150

Author National Imagery and Mapping Agency
Publisher National Imagery and Mapping Agency

Publication date 2003

Edition date

Series/Journal name Technical Report

Issue identification TR8350.2

Data source ISO Geodetic Registry

Remarks Replaces World Geodetic System 1984 (G873) from 2002-01-20.

Replaced by World Geodetic System 1984 (G1674) from 2012-02-08. Used in broadcast ephemeris from 2002-01-20 to 2012-02-07 and in

precise ephemeris from 2002-01-20 to 2012-05-06.

Anchor definition Defined through coordinates of 17 GPS tracking stations adjusted to a

subset of 49 IGS stations. Observations made in February 2001. The reference epoch for ITRF2000 is 1997.0; the station coordinates were

propagated to 2001.0 using IERS station velocities.

Release date 2002-01-20
Coordinate Reference Epoch 2001.0

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	

Item class Ellipsoid

Name **WGS 84**

Item status **VALID** Identifier 30 Alias **WGS84**

Information source

Information source Title Department of Defense World Geodetic System

1984: Its Definition and Relationships with Local

Geodetic Systems, Version 1.0.0

National Geospatial-Intelligence Agency Author Publisher National Geospatial-Intelligence Agency

Publication date 2014-07-08

Series/Journal name Standardization Document Issue identification NGA.STND.0036_1.0.0_WGS84 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

Title Refinements to The World Geodetic System 1984 Information source

S. Malys, J.A. Slater, R.W. Smith, L.E. Kunz, S.C. **Author**

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

841-850 Page

ISO Geodetic Registry Data source

The World Geodetic System 1984 (WGS 84) contains four defining Remarks

> 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).

6378137.0 m Semi-major axis

Inverse flattening 298.2572236 m

Item class PrimeMeridian

Name Greenwich

Item statusVALIDIdentifier25

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 °

CartesianCS Item class

Name Geocentric 3D right-handed Cartesian CS.

Axes: Geocentric X,Y,Z. Orientation: Z to North

Pole, [X and Y in the equatorial plane, X at

Prime Meridian | X in the equatorial plane at the

Prime Meridian]. UoM: m.

Item status **VALID** Identifier 45

Alias Earth centred, earth fixed, right-handed 3D coordinate system,

> consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing

towards North Pole. UoM: m.

Alias **ECEF**

Information source Title ISO 19111 Geographical information - Spatial

referencing by coordinates

International Organization for Standardization Author

(ISO)

Publisher International Organization for Standardization

(ISO)

2007-07-01 Publication date Edition Second Edition Series/Journal name International Standard

Issue identification ISO 19111:2007

Data source ISO Geodetic Registry

Used in geocentric coordinate reference systems. Remarks

Axes

Item class	CoordinateSystemA	CoordinateSystemAxis	
Name	Geocentric X		
Item status	VALID		
Identifier	33		
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates	
	Author	International Organization for Standardization (ISO)	
	Publisher	International Organization for Standardization (ISO)	
	Publication date	2007-07-01	
	Edition	Second Edition	
	Series/Journal nam	e International Standard	
	Issue identification	ISO 19111:2007	
Data source	ISO Geodetic Registry		

Data source ISO Geodetic Registry

Abbreviation Χ

Direction Geocentre > equator/0°E

Unit metre

Item class CoordinateSystemAxis Name **Geocentric Y**

VALID Item status Identifier 37

Title ISO 19111 Geographical information - Spatial Information source

referencing by coordinates

Author International Organization for Standardization

(ISO)

Publisher International Organization for Standardization

(ISO)

2007-07-01 Publication date Edition Second Edition Series/Journal name International Standard

Issue identification ISO 19111:2007

Data source ISO Geodetic Registry

Abbreviation

Direction Geocentre > equator/90°E

Unit metre

CoordinateSystemAxis Item class

Name **Geocentric Z**

VALID Item status Identifier 39

Information source Title ISO 19111 Geographical information - Spatial

referencing by coordinates

Author International Organization for Standardization

(ISO)

Publisher International Organization for Standardization

(ISO)

2007-07-01 Publication date Edition Second Edition Series/Journal name International Standard Issue identification ISO 19111:2007

ISO Geodetic Registry

Abbreviation Ζ

Data source

Direction Geocentre > north pole

Unit metre