Item class GeodeticCRS

Name ITRF2005 - XYZ

Item status VALID
Identifier 269

Alias International Terrestrial Reference Frame 2005

Alias IERS Terrestrial Reference Frame 2005

Information source Title ITRF2005: A new release of the International

Terrestrial Reference Frame based on time series of station positions and Earth Orientation

Parameters

Author Z. Altamimi, X. Collilieux, J. Legrand, B. Garayt,

C. Boucher

Publisher American Geophysical Union

Publication date 2007-09-07

Edition date

Series/Journal name Journal of Geophysical Research

Issue identification Vol 112

Information source Title ITRF2005 on line 2006-10-05

Author IERS
Publication date 2006-10-05

Edition date

Series/Journal name IERS Message

Issue identification 97.0
ISO Geodetic Registry

Remarks Replaces ITRF2000 - XYZ. Replaced by ITRF2008 - XYZ.

Scope Spatial referencing

Datum International Terrestrial Reference Frame 2005

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 | X in the equatorial plane at the Prime Meridian]. UoM:

m

Extent

Data source

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 International Terrestrial Reference Frame 2005

Item statusVALIDIdentifier105

Alias ITRF2005

Alias IERS Terrestrial Reference Frame 2005

Information source Title National Vertical Control Network - Notice of Final

Action

Author US Government

Publisher Office of Federal Register, NARA

Publication date 1976-05-14 Edition date 1976-05-17

Series/Journal name Federal Register Notice

Issue identification Volume 41, No. 96, Document 76-14245

Page 20202.0

Other citation details Formally adopted usage of NGVD 29 as datum

name

Information source Title ITRF2005: A new release of the International

Terrestrial Reference Frame based on time series of station positions and Earth Orientation

Parameters

Author Z. Altamimi, X. Collilieux, J. Legrand, B. Garayt,

C. Boucher

Publisher American Geophysical Union

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Issue identification Vol 112

Information source Title ITRF2005 on line 2006-10-05

Author IERS
Publication date 2006-10-05

Edition date

Series/Journal name IERS Message

Issue identification 97.0

Data source ISO Geodetic Registry

Remarks Replaces ITRF2000. Replaced by ITRF2008. This is a purely Cartesian

reference frame with no ellipsoid defined. GRS80 is the ellipsoid

recommended by the IAG and IERS.

Anchor definition Realisation of the IERS Terrestrial Reference System (ITRS) at

reference epoch 2000.0. Origin at geocentre, originally orientated to the BIH Terrestrial System at epoch 1984.0 then adjusted to ensure zero net rotation to earth's overall tectonic motion. Origin is defined such that there are null translation parameters at epoch 2000.0 and null translation rates between the ITRF2005 and the ILRS SLR time series. Scale is defined such that there are null scale factor at epoch 2000.0 and null scale rate between the ITRF2005 and IVS VLBI time series. Orientation is defined such that there are null rotation parameters at epoch 2000.0 and null rotation rates between the ITRF2005 and ITRF2000. Datum defined by a set of 3 dimensional Cartesian station

coordinates and velocities given by the citations.

Release date 2006-10-05
Coordinate Reference Epoch 2000.0

Scope Spatial referencing

Ellipsoid GRS 1980
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 GRS 1980

Item status VALID Identifier 27

Alias Geodetic Reference System 1980

Alias GRS1980
Alias IAG GRS80

Alias International 1979

Alias GRS80

Information source Title Geodetic Reference System 1980

Author H. Moritz

Publisher Springer International Publishing

Publication date 2003-03

Series/Journal name Journal of Geodesy Issue identification Volume 74, No. 1

Page 128–162

Information source Title Geodetic Reference System 1980

Author H. Moritz

Publisher International Association of Geodesy

Publication date 1984

Series/Journal name Bulletin Geodesique Issue identification Volume 58, No. 3

Page 395-405

Data source ISO Geodetic Registry

Remarks Adopted by IUGG 1979 Canberra. Inverse flattening is derived from

geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity =

7292115e-11 rad/s.

 Semi-major axis
 6378137.0 m

 Inverse flattening
 298.257222101 m

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 °

Item class CartesianCS

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

Author International Organization for Standardization

(ISO)

Publisher International Organization for Standardization

(ISO)

Publication date 2007-07-01

Edition Second Edition

Series/Journal name International Standard

Issue identification ISO 19111:2007

ISO Geodetic Registry

Remarks Used in geocentric coordinate reference systems.

Axes

Unit

Data source

Item class 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 Publisher International Organization for Standardization (ISO) Publication date 2007-07-01 Edition Second Edition Series/Journal name International Standard Issue identification ISO 19111:2007 Data source ISO Geodetic Registry Abbreviation Χ Direction Geocentre > equator/0°E

Item class CoordinateSystemAxis

metre

Name Geocentric Y

Item statusVALIDIdentifier37

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

Data source ISO Geodetic Registry

Abbreviation Ζ

Direction Geocentre > north pole

Unit metre