Item class GeodeticCRS

Name ITRF92 - XYZ

Item status VALID
Identifier 261

Alias International Terrestrial Reference Frame 1992

Alias IERS Terrestrial Reference Frame 1992

Information source Title No-net-rotation model of current plate velocities

incorporating plate motion model NUVEL-1

Author D.F. Argus, R.G. Gordon
Publisher American Geophysical Union

Publication date 1990-05-01

Edition date

Series/Journal name Geophysical Research Letters

Issue identification Volume 18, Issue 11

Information source Title ITRF 92 and its associated velocity field

Author C. Boucher, Z. Altamimi, L. Duhem
Publisher Central Bureau of IERS - Observatoire de Paris,

61 avenue de l'Observatoire, 75014 Paris, France

Publication date 1993-10-01

Edition date

Series/Journal name IERS Technical Notes

Issue identification 15.0 ISO Geodetic Registry

Remarks Replaces ITRF91 - XYZ. Replaced by ITRF93 - XYZ.

Scope Spatial referencing

Datum International Terrestrial Reference Frame 1992

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 1992

Item statusVALIDIdentifier103AliasITRF 92

Alias IERS Terrestrial Reference Frame 1992

Alias ITRF92

Information source Title No-net-rotation model of current plate velocities

incorporating plate motion model NUVEL-1

Author D.F. Argus, R.G. Gordon
Publisher American Geophysical Union

Publication date 1990-05-01

Edition date

Series/Journal name Geophysical Research Letters

Issue identification Volume 18, Issue 11
Title IERS Conventions (2010)

Information source Title IERS Conventions (2010)
Author G. Petit, B.J. Luzum (eds)

Publisher Verlag des Bundesamts für Kartographie und

Geodasie

Publication date 2010

Edition date

Series/Journal name IERS Technical Notes

Issue identification 36.0

Other citation details ISSN: 1019-4568

Information source Title ITRF 92 and its associated velocity field

Author C. Boucher, Z. Altamimi, L. Duhem

Publisher Central Bureau of IERS - Observatoire de Paris,

61 avenue de l'Observatoire, 75014 Paris, France

Publication date 1993-10-01

Edition date

Series/Journal name IERS Technical Notes

Issue identification 15.0

Data source ISO Geodetic Registry

Remarks Replaces ITRF91. Replaced by ITRF93. 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 1988.0. Origin is defined by SLR. Scale is defined by SLR noting that the scales of most VLBI Solutions are consistent with SLR. Orientation is defined such that no global rotation exists with respect to ITRF91. In order to insure the condition of no-net-rotation of the ITRS orientation with respect to the Earth's crust, NNR-NUVEL1 was selected as the reference motion model as recommended by the IERS Conventions (1992) (McCarthy, 1992). Datum defined by a set of 3 dimensional Cartesian station coordinates and velocities given in the citations. The ITRF92 velocity field has been obtained by combination of eight site velocity fields estimated by SLR and VLBI analysis centers.

Release date 1993-10-01

Coordinate Reference Epoch 1988.0

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 statusVALIDIdentifier27

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 °

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 Second Edition 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 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 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

Data source ISO Geodetic Registry

Abbreviation Ζ

Direction Geocentre > north pole

Unit metre