Item class **GeodeticCRS**

Name SIRGAS-CON DGF05P01 - LatLonEHt

Item status VALID 220 Identifier Alias **SIRGAS** Alias SIRGAS-CON Alias DGF05P01 Alias DGFI05P01

Alias SIRGAS Multi-Year Solution 2005

Alias Geocentric Reference System for the Americas

Sistema de Referencia Geocentrico para las Americas Alias

Title Information source Sistema de Referencia Geocentrico para las

Americas (SIRGAS)

Author Sistema de Referencia Geocéntrico para las

Américas (SIRGAS)

Publisher Sistema de Referencia Geocéntrico para las

Américas (SIRGAS)

Publication date 2018 Other citation details Website

Information source Title Deformation of the South American crust

estimated from finite element and collocation

methods

Author H. Drewes, O. Heidbach Publisher Springer Berlin Heidelberg

Publication date 2005

Series/Journal name International Association of Geodesy Symposia

Issue identification 128.0 Page 544-549

Other citation details In Sanso F. (eds) A Window on the Future of

Geodesy. International Association of Geodesy Symposia, Vol 128. Springer, Berlin, Heidelberg

Report on new activities of IGS Regional

Title Information source

Associate Analysis for SIRGAS (IGS RNAAC

SIR)

W. Seemueller Author

Publication date 2005

Other citation details Presented at the SIRGAS 2005 General Meeting.

Caracas, Venezuela

Data source ISO Geodetic Registry Scope Spatial referencing

Datum SIRGAS Continuously Operating Network DGF05P01

Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Coordinate System

Orientations: north, east, up. UoM: degree, degree, metre.

Extent

Description South America - onshore and offshore. Central America - onshore and offshore. Mexico onshore and offshore. West-bound longitude Geographic Bounding Box -122.19

North-bound latitude 32.72

-25.28 East-bound longitude

Item class GeodeticDatum

Name SIRGAS Continuously Operating Network

DGF05P01

Item statusVALIDIdentifier125AliasSIRGASAliasSIRGAS-CONAliasDGF05P01AliasDGF105P01

Alias SIRGAS Multi-Year Solution 2005

Alias Geocentric Reference System for the Americas

Alias Sistema de Referencia Geocentrico para las Americas

Information source Title Sistema de Referencia Geocentrico para las

Americas (SIRGAS)

Author Sistema de Referencia Geocéntrico para las

Américas (SIRGAS)

Publisher Sistema de Referencia Geocéntrico para las

Américas (SIRGAS)

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Geodesy. International Association of Geodesy Symposia, Vol 128. Springer, Berlin, Heidelberg

Data source ISO Geodetic Registry

Remarks Replaces DGF04P01. Replaced by DGF06P01.

Anchor definition Realized by a frame of 95 continuously operating stations using

GPS observations from June 1996 to September 2005 and aligned to ITRF2000 at epoch 2004.0. Velocity model VEMOS2003 used to propagate coordinates from an arbitrary epoch to the 2004.0 reference

epoch.

Release date 2005 Coordinate Reference Epoch 2004.0

Scope Spatial referencing

Ellipsoid GRS 1980
Prime Meridian Greenwich

Extent

| Description | South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore. | |
|-------------------------|--|--------------------------------------|
| Geographic Bounding Box | West-bound longitude North-bound latitude East-bound longitude South-bound latitude | -122.19 32.72 -25.28 -59.87 |

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 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 °

Item class EllipsoidalCS

Name Ellipsoidal 3D CS. Axes: latitude, longitude,

ellipsoidal height. Orientations: north, east, up.

UoM: degree, degree, metre.

Item status VALID
Identifier 46

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

Data source ISO Geodetic Registry

Remarks Used in geographic 3D coordinate reference systems. Horizontal

coordinates referenced to this CS are in degrees. Any degree

representation (e.g. DMSH, decimal, etc.) may be used but that used

must be declared for the user.

Axes

Item class CoordinateSystemAxis

Name Geodetic latitude

Item statusVALIDIdentifier38

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

Data source ISO Geodetic Registry

Remarks Used in geographic 2D and geographic 3D coordinate reference

systems.

Abbreviation Lat
Direction north

Unit degree (supplier to define representation)

Item class CoordinateSystemAxis

Name Geodetic longitude

Item status VALID
Identifier 34

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

Data source ISO Geodetic Registry

Remarks Used in geographic 2D and geographic 3D coordinate reference

systems.

Abbreviation Lon
Direction east

Unit degree (supplier to define representation)

Item class CoordinateSystemAxis

Name Ellipsoidal height

Item statusVALIDIdentifier36

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

Data source ISO Geodetic Registry

Remarks Used only as part of an ellipsoidal 3D coordinate system in a

geographic 3D coordinate reference system, never on its own.

Abbreviation h
Direction up

Unit metre