Item class GeodeticCRS

Name SIRGAS-CON SIR13P01 - LatLonEHt

Item statusVALIDIdentifier399AliasSIRGAS

Alias SIRGAS Multi-Year Solution 2013

Alias SIRGAS-CON
Alias SIR13P01

Alias Geocentric Reference System for the Americas

Alias Sistema de Referencia Geocentrico para las Americas

Information source Title The 2009 Horizontal Velocity Field for South

America and the Caribbean H. Drewes, O. Heidbach

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

Publication date 2012

Series/Journal name International Association of Geodesy Symposia

Issue identification 136.0 Page 657-664

Other citation details In Kenyon S., Pacino M., Marti U. (eds) Geodesy

for Planet Earth. International Association of Geodesy Symposia, Vol 136. Springer, Berlin,

Heidelberg

Information source Title SIRGAS core network stability

Author L. Sanchez, H. Drewes, C. Brunini, M.V. Mackern,

W. Martinez-Diaz

Publisher Springer Berlin Heidelberg

Publication date 2016

Series/Journal name International Association of Geodesy Symposia

Issue identification 143.0 Page 183-190

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)

Publication date 2018
Other citation details Website

Data source ISO Geodetic Registry
Scope Spatial referencing

Datum SIRGAS Continuously Operating Network SIR13P01

Coordinate System Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.

Extent

South America - onshore and offshore. Central America - onshore and offshore. Mexico - onshore and offshore.

Geographic Bounding Box West-bound longitude -122.19

North-bound latitude 32.72 East-bound longitude -25.28

Item class GeodeticDatum

Name SIRGAS Continuously Operating Network

SIR13P01

Item statusVALIDIdentifier177AliasSIRGAS

Alias SIRGAS Multi-Year Solution 2013

Alias SIRGAS-CON
Alias SIR13P01

Alias Geocentric Reference System for the Americas

Alias Sistema de Referencia Geocentrico para las Americas

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Author Sistema de Referencia Geocéntrico para las

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Publisher Sistema de Referencia Geocéntrico para las

Américas (SIRGAS)

Publication date 2018
Other citation details Website

Data source ISO Geodetic Registry

Remarks Replaces SIR11P01. Replaced by SIR14P01. First multi-year solution

after the El Maule earthquake of February 2010.

Anchor definition Realized by a frame of 108 continuously operating stations using GPS

observations from April 2010 to June 2013 and aligned to IGb08 at epoch 2012.0. Weekly normal equations from April 2010 to April 2011 were reprocessed using the second reprocessing campaign products (IG2) of the International GNSS Service and absolute phase centre calibrations referring to the IGS08 reference frame. Velocity model VEMOS2009 used to propagate coordinates from an arbitrary epoch to

the 2012.0 reference epoch.

Release date 2013 Coordinate Reference Epoch 2012.0

Scope Spatial referencing

Ellipsoid GRS 1980

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 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 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)

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 geographic 2D and geographic 3D coordinate reference Remarks

systems.

Abbreviation Lon Direction east

Unit degree (supplier to define representation)

Item class CoordinateSystemAxis

Name Ellipsoidal height

VALID Item status Identifier 36

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 ISO 19111:2007

Issue identification

ISO Geodetic Registry Data source

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