

SP_Crater_Centroid .doc
Mars Global Digital Dune Database: MC-30
By R.K. Hayward, L.K. Fenton,
T.N. Titus, A. Colaprete, and P.R. Christensen
2012
(<http://pubs.usgs.gov/of/2012/1259>)

Summary

See Pamphlet.doc, Mars Global Digital Dune Database Purpose.

Description

See Pamphlet.doc, Mars Global Digital Dune Database Abstract.

Credits

There are no credits for this item.

Access and use limitations

There are no restrictions.

ArcGIS Metadata

Resource Identification

Citation Title: SP_Crater_Centroid_Geog
Alternate Titles: South Pole Crater Centroid
Presentation Format: digital map
Collection Title: Mars Global Digital Dune Database
Responsible Party:
Individual's Name: Rosalyn K. Hayward
Organization's Name: USGS, Astrogeology
Contact's Position: Geologist
Contact's Role: Originator
Contact Information:
Phone:
Voice: (928) 566-7022
Fax: (928) 566-7014
Address:
Delivery Point: 2255 N. Gemini Dr.
City: Flagstaff
Administrative Area: Az
Postal Code: 86001
Country: United States
E-Mail Address: rhayward@usgs.gov

Publication Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey
Online_Linkage: <http://pubs.usgs.gov/of/2012/1259>

Themes Or Categories Of The Resource :

geoscientificInformation

Tags For Searching: Dune, Aeolian, Mars, Database, GCM

Discipline Keywords: Planetary Science

Place Keywords: Mars

Theme Keywords: Dune

Theme Keywords: Aeolian

Theme Keywords: Database

Theme Keywords: GCM

Dataset Languages: English (United States)

Dataset Character Set Utf8 - 8 Bit Ucs Transfer Format

Status: Completed

Resource Maintenance:

Update Frequency: Not Planned

Scope Of The Updates: Dataset

Resource Constraints:

Constraints:

Limitations Of Use:

There are no restrictions.

Spatial Representation Type: Vector

* Processing Environment: Microsoft Windows Server 2008 R2 Version 6.1 (Build 7601) Service

Pack 1; Esri Arcgis 10.0.2.3200

Other Extent Information:

Geographic Extent:

Bounding Rectangle:

* Extent Type Extent Used For Searching

* West Longitude -179.628372

* East Longitude 179.627566

* North Latitude -65.064864

* South Latitude -80.194694

* Extent Contains The Resource: Yes

Point Of Contact:

Individual's Name: Rosalyn K. Hayward

Organization's Name: USGS, Astrogeology

Contact's Position: Geologist

Contact's Role: Originator

Contact Information:

Phone:

Voice: (928) 566-7022

Fax: (928) 566-7014

Address:

Delivery Point: 2255 N. Gemini Dr.
City: Flagstaff
Administrative Area: Az
Postal Code: 86001
Country: United States
E-Mail Address: rhayward@usgs.gov

Reference System

Reference System Identifier

Value 104905

* Codespace Esri

* Version 10.0.0

Data Quality

Scope Of Quality Information

Resource Level: dataset

Lineage:

Process Step:

See Pamphlet.doc, Mars Global Digital Dune Database Process.

Data Quality Report - Completeness Omission:

See Pamphlet.doc, Mars Global Digital Dune Database – Completeness of Database.

Data Quality Report - Conceptual Consistency

Measure Description:

All attributes were verified by displaying the lines in both the database and the spatial coverage and they are believed to be logically consistent.

Data Quality Report - Topological Consistency

Measure Description:

These data are believed to be logically consistent. Line geometry is topologically clean.

Data Quality Report - Absolute External Positional Accuracy:

Measure Description:

The horizontal accuracy is derived from the accuracy of the Mars Orbiter Laser Altimeter (MOLA) dataset [Smith and others, 2001]. The globally adjusted MOLA dataset has an absolute horizontal accuracy on the order of 100 m, but individual features in images can probably only be tied to MOLA-derived shaded-relief digital image models with a precision on the order of 200 m. Other bases used included Thermal Emission Imaging System (THEMIS) digital images [Archinal and others, 2003, Christensen and others, 2004]. The digital features were drawn at 20K to 100K scale with a node spacing of approximately 0.3 km to 2 km.

ESRI Metadata and Item Properties

Metadata Properties:

Arcgis: Arcgis1.0

Metadata Style: FGDC CSDGM Metadata
Metadata Standard Or Profile: FGDC
Created In Arcgis: 2012-05-14t13:03:12
Last Modified In Arcgis: 2012-06-03t15:08:05
Automatic Updates:
Last Update: 2012-06-03t15:06:39
Have Been Performed: Yes

Item Properties

Name: SP_Crater_Centroid_Geog
Content Type: Downloadable Data

ESRI Spatial Information

Extent In The Item's Coordinate Reference

Bounding Rectangle:

- * West Longitude -179.628372
- * East Longitude 179.627566
- * North Latitude -65.064864
- * South Latitude -80.194694
- * Extent Contains The Resource: Yes

Coordinate Reference

Type: Geographic

Geographic Coordinate Reference: GCS_Mars_2000

Coordinate Reference Details

Geographic Coordinate
System

Well-Known Identifier: 104905
X Origin: -399.99999999999989
Y Origin: -399.99999999999989
XY Scale: 1000000000.0000001
Z Origin: -100000
Z Scale: 10000
M Origin: -100000
M Scale: 10000
XY Tolerance: 1.6870604858115214e-008
Z Tolerance: 0.001
M Tolerance: 0.001
High Precision: True
Left Longitude: -180
Well-Known Text
GEOGCS["GCS_Mars_2000",DATUM["D_Mars_2000",SPHEROID
["Mars_2000_IAU_IAG",3396190.0,169.8944472236118]],PRIMEM
["Reference_Meridian",0.0],UNIT["Degree",0.0174532925199433],A
UTHORITY ["ESRI",104905]]

ESRI Feature Class

Feature Class Name: SP_Crater_Centroid_Geog

- * Feature Type: Simple
- * Geometry Type: Polyline
- * Has Topology: False
- * Feature Count: 348
- * Spatial Index: True
- * Linear Referencing: False

ESRI Fields and Subtypes

SP_Crater_Centroid_Geog

Feature Class

* ROW COUNT 348

DEFINITION

(shape – point) Points that show location of centroids of craters on Mars between lat 65° and 90° S. that are occupied by dune fields in the database. We did not force a centroid to fall within its polygon, therefore for irregular polygons the centroid may fall outside the polygon. Note that the term "crater" was used for simplicity, even though a small number of the circular depressions containing dunes may not be impact craters. (~350 records)

DEFINITION SOURCE

Mars Global Digital Dune Database

FIELD OBJECTID

- * ALIAS OBJECTID
- * DATA TYPE OID
- * WIDTH 4

FIELD DESCRIPTION

Internal feature number.

- * DESCRIPTION SOURCE
ESRI

* DESCRIPTION OF VALUES Sequential unique whole numbers that are automatically generated.

FIELD Shape

- * ALIAS Shape
- * DATA TYPE Geometry
- * FIELD DESCRIPTION
Feature geometry.
- * DESCRIPTION SOURCE
ESRI

* DESCRIPTION OF VALUES Coordinates defining the features.

FIELD CBarlowID

- ALIAS Crater_“BarlowID”
- * DATA TYPE String

* WIDTH 20

FIELD DESCRIPTION

Crater_ "BarlowID" (CraterBID) - a unique ID number constructed after the method used by Barlow (2003) to assign ID numbers to craters. Longitude is listed first and both values are extended to one decimal place. The + or - sign of the latitude is given, indicating the break between the two values. Thus 122.5 east longitude, -34.5 south latitude, becomes 1225-345. The longitude is always four digits and the latitude is always three digits, filling in with leading zeroes where necessary. Note that the term "crater" was used for simplicity, even though a small number of the circular depressions containing dunes may not be impact craters.

Metadata Details

Metadata Language: English

Metadata Character Set: Utf8 - 8 Bit Ucs Transfer Format

Scope Of The Data Described By The Metadata: Dataset

* Scope Name: Dataset

Metadata Contact:

Individual's Name: Rosalyn K. Hayward

Organization's Name: USGS, Astrogeology

Contact's Position: Geologist

Contact's Role: Originator

Contact Information:

Phone:

Voice: (928) 566-7022

Fax: (928) 566-7014

Address:

Delivery Point: 2255 N. Gemini Dr.

City: Flagstaff

Administrative Area: Az

Postal Code: 86001

Country: United States

E-Mail Address: rhayward@usgs.gov

* Last Update: 2012-06-03

Maintenance:

Update Frequency: Not Planned

Scope Of The Updates: Dataset