Soil_Roughness

File Geodatabase Table

Thumbnail Not Available

Tags

PALS, soil roughness, UAVSAR, RADARSAT-2, environment, SMAPVEX12, geoscientificInformation

Summary

This table was generated for use in analysis and validation associated with the SMAPVEX12 (Soil Moisture Active-Passive Validation Experiment 2012) project.

Description

This table contains soil roughness measurements taken at two locations within each SMAPVEX field in the look directions of RADARSAT-2 (descending mode), UAVSAR, and PALS. Surface roughness was measured using a digital camera and a 1-m long pin profilometer consisting of 200 needles spaced from an interval of 5 mm. Three end-to-end images were captured to create a 3-m profile. For each SAR sensor and at each location, the photographs of the three separate profiles were joined into a single profile using a matlab application, post data collection, to provide the two roughness parameters: the standard deviation of surface heights (or the RMS heights) and the correlation lengths.

UAVSAR Angle = 226

PALS Angle = 180

RADARSAT2 Angle = 282

NULL values in the table are due to their bad quality, few pictures were not processed or the software fails to estimate the correlation length.

Credits

Grant Wiseman Senior Geomatics Scientist – Scientifique principal en géomatique Agriculture and Agri-Food Canada – Agriculture et Agroalimentaire Canada Telephone - Téléphone: 204-259-4006 Cellular - Cellulaire: 204-293-6074 Facsimile - Télécopieur: 204-259-4055 200-303 Main Street, Winnipeg, MB R3C 3G7 grant.wiseman@agr.gc.ca

Use limitations

All SMAPVEX12 data (except those already on public domain servers) will be placed on the University of Sherbrooke site. Access will be limited by password that will be provided to principle investigators and co-investigators listed below. It will be up to the principle investigators and co-investigators to ensure that staff, graduate students and post docs respect the terms of the agreement on usage and distribution. Access to the website will be restricted until July 1, 2013 for preliminary research and quality control. After July 1, 2013 all data will be transferred to a SMAP DAAC. Principle Investigators Heather McNairn, Agriculture and Agri-Food Canada Tom Jackson, USDA, ARS Hydrology and Remote Sensing Laboratory Co-Investigators Aaron Berg, University of Guelph Amine Merzouki, Agriculture and Agri-Food Canada Andreas Colliander, JPL Anne Walker, Environment Canada Brenda Toth, Environment Canada/MSC/HAL Catherine Champagne, Agriculture and Agri-Food Canada Craig Smith, Environment Canada Dara Entekhabi, MIT Eni Njoku, JPL Grant Wiseman, Agriculture and Agri-Food Canada Jarrett Powers, Agriculture and Agri-Food Canada Jiali Shang, Agriculture and Agri-Food Canada John Fitzmaurice, Agriculture and Agri-Food Canada Mahta Moghaddam, University Southern California Mike Cosh, USDA, ARS Hydrology and Remote Sensing Laboratory Narendra Das, JPL Paul

Bullock, University of Manitoba Peggy O'Neill, NASA GSFC Ramata Magagi, University of Sherbrooke Rotimi Ojo, University of Manitoba Sab Kim, JPL Stéphane Bélair, Environment Canada - NWP and Data Assimilation Alicia Joseph, NASA GSFC Erika Podest, JPL John Kimball, University of Montana Kalifa Goïta, University of Sherbrooke Marco Carrera, Environment Canada, Meteorological Research Division Steven Chan, JPL Vanessa Escobar, NASA GSFC

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE environment, geoscientificInformation

* CONTENT TYPE Downloadable Data

THEME KEYWORDS environment, geoscientificInformation

THESAURUS ►
TITLE ISO 19115 Topic Categories

Hide Thesaurus ▲

THEME KEYWORDS PALS, soil roughness, UAVSAR, RADARSAT-2, SMAPVEX12

Hide Topics and Keywords ▲

Citation ►

TITLE Soil_Roughness

PRESENTATION FORMATS digital document
FGDC GEOSPATIAL PRESENTATION FORMAT tabular digital data

Hide Citation ▲

Resource Details ►

DATASET LANGUAGES English (CANADA)

SPATIAL REPRESENTATION TYPE * text table

PROCESSING ENVIRONMENT Microsoft Windows 7 Version 6.1 (Build 7601) Service Pack 1; ESRI ArcGIS 10.0.5.4400

CREDITS

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ARCGIS ITEM PROPERTIES

* NAME Soil_Roughness
* LOCATION
file://\\mbwinnfs106\gis$\data8\projects\land\soil\SMAPVEX12\data\Kurt\SMAPVEX_MASTER.gdb
* ACCESS PROTOCOL Local Area Network

Hide Resource Details ▲

Resource Points of Contact ►

POINT OF CONTACT
INDIVIDUAL'S NAME Grant Wiseman
ORGANIZATION'S NAME Agriculture and Agri-Food Canada – Agriculture et Agroalimentaire Canada
CONTACT'S POSITION Senior Geomatics Scientist – Scientifique principal en géomatique
CONTACT'S ROLE point of contact

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Hide Contact information ▲

Hide Resource Points of Contact ▲

Resource Maintenance ►

RESOURCE MAINTENANCE
UPDATE FREQUENCY as needed

Hide Resource Maintenance ▲

Resource Constraints ►

CONSTRAINTS
LIMITATIONS OF USE
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Hide Resource Constraints ▲

Distribution ►

DISTRIBUTION FORMAT
* NAME File Geodatabase Table

Hide Distribution ▲

Fields ►

DETAILS FOR OBJECT Soil_Roughness ►
* TYPE Table
* ROW COUNT 115

DEFINITION
Soil roughness measurements taken at two locations within each SMAPVEX field .

DEFINITION SOURCE
AAFC

FIELD OBJECTID ►
* ALIAS OBJECTID
* DATA TYPE OID
* WIDTH 4
* PRECISION 0
* SCALE 0

FIELD DESCRIPTION
Internal feature number.

DESCRIPTION SOURCE
ESRI

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

Hide Field OBJECTID ▲

FIELD Site_ID ►
* ALIAS Site_ID
* DATA TYPE String
* WIDTH 255
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Hyphenated identification number of the SMAPVEX field and sample site.

DESCRIPTION SOURCE
AAFC

Hide Field Site_ID ▲

FIELD UAV_Height ►
* ALIAS UAV_Height
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Is the RMS height in cm measured in the look direction of UAVSAR

Hide Field UAV_Height ▲

FIELD UAV_Cor_L ►
* ALIAS UAV_Cor_L
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
is the correlation length in cm measured in the look direction of UAVSAR

Hide Field UAV_Cor_L ▲

FIELD PALS_Height ►
* ALIAS PALS_Height
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Is the RMS height in cm measured in the look direction of PALS

Hide Field PALS_Height ▲

FIELD PALS_Cor_L ►
* ALIAS PALS_Cor_L
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
is the correlation length in cm measured in the look direction of PALS

Hide Field PALS_Cor_L ▲

FIELD R2_Height ►
* ALIAS R2_Height
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
Is the RMS height in cm measured in the look direction of RADARSAT-2

Hide Field R2_Height ▲

FIELD R2_Cor_L ►
* ALIAS R2_Cor_L
* DATA TYPE Double
* WIDTH 8
* PRECISION 0
* SCALE 0
FIELD DESCRIPTION
is the correlation length in cm measured in the look direction of RADARSAT-2

Hide Field R2_Cor_L ▲

Hide Details for object Soil_Roughness ▲

Hide Fields ▲

Metadata Details ►

METADATA LANGUAGE English (CANADA)
METADATA CHARACTER SET utf8 - 8 bit UCS Transfer Format

SCOPE OF THE DATA DESCRIBED BY THE METADATA dataset
SCOPE NAME * dataset

LAST UPDATE 2013-04-24

ARCGIS METADATA PROPERTIES

METADATA FORMAT ArcGIS 1.0

METADATA STYLE FGDC CSDGM Metadata

STANDARD OR PROFILE USED TO EDIT METADATA FGDC

CREATED IN ARCGIS FOR THE ITEM 2013-04-24 15:58:07

LAST MODIFIED IN ARCGIS FOR THE ITEM 2013-04-24 16:35:34

AUTOMATIC UPDATES

HAVE BEEN PERFORMED Yes

LAST UPDATE 2013-04-24 16:35:34