

Metadata for: brazil_solar_direct_40km

Identification Information

Originator: INPE (National Institute for Space Research) and LABSOLAR (Laboratory of Solar Energy/Federal University of Santa Catarina) - Brazil

Title: Solar Radiation in Brazil

Description: Normal direct solar radiation in kWh/m2/day for 1 year organized into cells with 40km x 40km

Time period for which the data is relevant: indefinite

Spatial Extend of Data: Brazil

Bounding Coordinates:

West Bounding Coordinate: 78°10' W

East Bounding Coordinate: 28°30' W

North Bounding Coordinate: 8°10' N

South Bounding Coordinate: 36°10' S

Constraints:

Access: No restrictions

Use: Quoting the source is required: "INPE (National Institute for Spatial Research) and LABSOLAR (Laboratory of Solar Energy/Federal University of Santa Catarina) - Brazil"

Contact Information:

Organization: INPE - National Institute for Space Research

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Data Quality Information

Lineage: The BRASIL-SR model and the SPRING software (both developed by INPE - National Institute for Space Research) were used to produce the dataset and SHAPE files

Attribute Accuracy: The assessment of reliability levels of the BRASIL-SR model were performed through the evaluation of the deviations shown by the estimated values for solar radiation flux vis-à-vis the values measured at the surface (ground truth). This evaluation was done in two phases. The first phase consisted in an inter-comparison between the core radiation transfer models adopted by the SWERA Project to map the solar energy in the various countries participating in the project. The HELIOSAT model took part in this phase like benchmark due to its employment to map solar energy resources in countries from European Union. In the second phase, the solar flux estimates provided by the BRASIL-SR model were compared with measured values acquired at several solarimetric stations spread along the Brazilian territory

Source Scale Denominator: 1

Spatial Reference Information

Spatial Object Type: Vector - polygon

Horizontal Coordinate Scheme: ---
Horizontal Units: Decimal degrees
Resolution: Latitude: 0.07° Longitude: 0.04°
UTM Zone Number: ---
Map Projection: Name: Geographic Parameters: Longitude of Central Meridian: 54° W Latitude of Projection Origin: 0° False Easting: 0 False Northing: 0
Other Coordinate System Definition: ---
Cells: Width: 40km Height: 40km
Geodetic Model: Horizontal Datum Name: SAD-69 Ellipsoid Name: Reference ellipsoid 1967 (International Astronomical Union)

Entity and Attribute Information

Entity and attribute overview: Normal direct solar radiation for the 12 months of the year in kWh/m2/day organized into cells with 40km x 40km Entity Label: brazil_solar_direct_40km.shp
Attribute Label: ID_CEL Attribute Definition: cell identification
Attribute Label: LONGITUDE Attribute Definition: longitude of the cell center
Attribute Label: LATITUDE Attribute Definition: latitude of the cell center
Attribute Label: JAN Attribute Definition: monthly average of the normal direct radiation for January
Attribute Label: FEB Attribute Definition: monthly average of the normal direct radiation for February
Attribute Label: MAR Attribute Definition: monthly average of the normal direct radiation for March
Attribute Label: APR Attribute Definition: monthly average of the normal direct radiation for April
Attribute Label: MAY Attribute Definition: monthly average of the normal direct radiation for May
Attribute Label: JUN Attribute Definition: monthly average of the normal direct radiation for June
Attribute Label: JUL Attribute Definition: monthly average of the normal direct radiation for July
Attribute Label: AUG Attribute Definition: monthly average of the normal direct radiation for August

Attribute Label: SEP
Attribute Definition: monthly average of the normal direct radiation for September
Attribute Label: OCT
Attribute Definition: monthly average of the normal direct radiation for October
Attribute Label: NOV
Attribute Definition: monthly average of the normal direct radiation for November
Attribute Label: DEC
Attribute Definition: monthly average of the normal direct radiation for December
Attribute Label: ANNUAL
Attribute Definition: annual average of the normal direct radiation
Attribute Label: SPRING
Attribute Definition: seasonal average of the normal direct radiation for Spring
Attribute Label: SUMMER
Attribute Definition: seasonal average of the normal direct radiation for Summer
Attribute Label: FALL
Attribute Definition: seasonal average of the normal direct radiation for Fall
Attribute Label: WINTER
Attribute Definition: seasonal average of the normal direct radiation for Winter

Metadata Reference Information:

Metadata Date: August 8, 2009
Metadata Contact:
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