

Metadata for: brazil_solar_global_10km

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: Global horizontal solar radiation in kWh/m2/day for 1 year organized into cells with 10km x 10km

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 Space Research) and LABSOLAR (Laboratory of Solar Energy/Federal University of Santa Catarina) - Brazil"

Contact Information:

Organization: INPE - National Institute for Space Research

Person: Enio Bueno Pereira

Mailing Address:

INPE - Instituto Nacional de Pesquisas Espaciais

Av. dos Astronautas, 1758 - São José dos Campos

SP - Brasil - CEP 12227-010

Phone Number: +55 12 3208-7786

Email Address: enio.pereira@inpe.br

Website: <http://www.inpe.br>

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: 10km Height: 10km
Geodetic Model: Horizontal Datum Name: SAD-69 Ellipsoid Name: Reference ellipsoid 1967 (International Astronomical Union)

Entity and Attribute Information

Entity and attribute overview: Global horizontal solar radiation for the 12 months of the year in kWh/m2/day organized into cells with 10km x 10km Entity Label: brazil_solar_global_10km.shp
Attribute Label: LONGITUDE Attribute Definition: longitude of the cell center
Attribute Label: LATITUDE Attribute Definition: latitude of the cell center
Attribute Label: JANEIRO Attribute Definition: monthly average of the global horizontal radiation for January
Attribute Label: FEVEREIRO Attribute Definition: monthly average of the global horizontal radiation for February
Attribute Label: MARCO Attribute Definition: monthly average of the global horizontal radiation for March
Attribute Label: ABRIL Attribute Definition: monthly average of the global horizontal radiation for April
Attribute Label: MAIO Attribute Definition: monthly average of the global horizontal radiation for May
Attribute Label: JUNHO Attribute Definition: monthly average of the global horizontal radiation for June
Attribute Label: JULHO Attribute Definition: monthly average of the global horizontal radiation for July
Attribute Label: AGOSTO Attribute Definition: monthly average of the global horizontal radiation for August
Attribute Label: SETEMBRO Attribute Definition: monthly average of the global horizontal radiation for September

Attribute Label: OUTUBRO

Attribute Definition: monthly average of the global horizontal radiation for October

Attribute Label: NOVEMBRO

Attribute Definition: monthly average of the global horizontal radiation for November

Attribute Label: DEZEMBRO

Attribute Definition: monthly average of the global horizontal radiation for December

Attribute Label: ANUAL

Attribute Definition: annual average of the global horizontal radiation

Attribute Label: PRIMAVERA

Attribute Definition: seasonal average of the global horizontal radiation for Spring

Attribute Label: VERAO

Attribute Definition: seasonal average of the global horizontal radiation for Summer

Attribute Label: OUTONO

Attribute Definition: seasonal average of the global horizontal radiation for Fall

Attribute Label: INVERNO

Attribute Definition: seasonal average of the global horizontal radiation for Winter

Metadata Reference Information:

Metadata Date: August 8, 2009

Metadata Contact:

Organization: INPE - National Institute for Space Research

Person: Enio Bueno Pereira

Mailing Address:

INPE - Instituto Nacional de Pesquisas Espaciais
Av. dos Astronautas, 1758 - São José dos Campos
SP - Brasil - CEP 12227-010

Phone Number: +55 12 3208-7786

Email Address: enio.pereira@inpe.br

Website: <http://www.inpe.br>
