

Metadata for South America Latitude Tilted Solar Radiation

(south_america_solartilted_40km)

Identification Information:	
Originator	INPE (National Institute for Spatial Research) and LABSOLAR (Laboratory of Solar Energy/Federal University of Santa Catarina) - Brazil
Title	Brasil-SR Solar Model for Brazil
Description	Mean values of Latitude Tilted Solar Radiation in kWh/m ² /day for 40km cells for 1 year (month, season, year) based on data from 1995 to 2005
Time period for which the data is relevant	Indefinite
Spatial Extend of Data	South America
Bounding Coordinates	West Bounding Coordinate: 81.4251 W East Bounding Coordinate: 34.8981 W North Bounding Coordinate: 12.4450 N South Bounding Coordinate: 55.0531 S
Access Constraints	No restrictions
Use Constraints	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	<i>Contact Organization:</i> INPE (National Institute for Spatial Research) <i>Contact Person:</i> Enio Bueno Pereira Fernando Ramos Martins <i>Mailing Address:</i> INPE / CCST Av. dos Astronautas, 1758 – Jardim da Granja São José dos Campos – SP – Brasil CEP 12227-010 <i>Phone Number:</i> +55 12 3945-6741 +55 12 3945-6778 <i>Email Address:</i> enio.pereira@cptec.inpe.br fernando.martins@cptec.inpe.br <i>Website:</i> http://www.inpe.br/

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Data Quality Information	
Lineage	The BRASIL-SR model (developed by INPE - National Institute for Space Research) and the ARCVIEW software 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. The BRASIL-SR model is not validated for areas covered by snow.
Source Scale Denominator	1

Spatial Reference Information	
Spatial Object Type	Vector - polygon
Horizontal Coordinate Scheme	
Horizontal Units	Decimal degrees
Latitude Resolution	
Longitude Resolution	
UTM Zone Number	-5
Map Projection Name	Geographic Coordinate System
Map Projection Parameters	Longitude of Central Meridian: 54° W
Latitude of Projection Origin	0°
False Easting	0
False Northing	0
Other Coordinate System Definition	
Cell Width	40km
Cell Height	40km
Geodetic Model	
Horizontal Datum Name	SAD-69
Ellipsoid Name	Reference ellipsoid 1967 (International Astronomical Union)

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Entity and Attribute Information	
Entity and attribute overview	Mean values of Latitude Tilted Solar Radiation in kWh/m ² /day for 40km cells for 1 year (month, season, year) based on data from 1995 to 2005
Entity Labels	south_america_solarpar_40km
Attribute Label and Definition	<p>ID_CE: cell identification LONGITUDE: longitude of the cell center LATITUDE: latitude of the cell center STATUS:</p> <ul style="list-style-type: none"> • suspicious data when the areas are covered by snow • reliable data when the areas are not covered by snow <p>JAN: monthly mean of latitude tilted solar radiation for January FEB: monthly mean of latitude tilted solar radiation for February MAR: monthly mean of latitude tilted solar radiation for March APR: monthly mean of latitude tilted solar radiation for April MAY: monthly mean of latitude tilted solar radiation for May JUN: monthly mean of latitude tilted solar radiation for June JUL: monthly mean of latitude tilted solar radiation for July AUG: monthly mean of latitude tilted solar radiation for August SEP: monthly mean of latitude tilted solar radiation for September OCT: monthly mean of latitude tilted solar radiation for October NOV: monthly mean of latitude tilted solar radiation for November DEC: monthly mean of latitude tilted solar radiation for December ANNUAL: annual mean of latitude tilted solar radiation SPRING: seasonal mean of latitude tilted solar radiation for Spring SUMMER: seasonal mean of latitude tilted solar radiation for Summer FALL: seasonal mean of latitude tilted solar radiation for Fall WINTER: seasonal mean of latitude tilted solar radiation for Winter</p>

Metadata Reference Information	
Metadata Date	August 05, 2009
Metadata Contact Organization	INPE - National Institute for Space Research
Metadata Contact Person	Enio B. Pereira
Mailing Address	INPE / CCST Av. dos Astronautas, 1758 – Jardim da Granja São José dos Campos – SP – Brasil CEP 12227-010 Phone: +55 12 3945-6741 Email: enio.pereira@cptec.inpe.br