Metadata for South America Global Horizontal Solar Radiation

(south_america_solarglobal_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 Global Horizontal Solar Radiation in kWh/m2/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	*Contact Organization:*
	    INPE (National Institute for Spatial Research)
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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 Coordenate 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 Global Horizontal Solar Radiation in kWh/m2/day for 40km cells for 1 year (month, season, year) based on data from 1995 to 2005
Entity Labels	south_america_solarglobal_40km

Attribute Label and Definition	ID_CE: cell identification
	LONGITUDE: longitude of the cell center
	LATITUDE: latitude of the cell center
	STATUS:
	  • suspicious data when the areas are covered by snow
	  • reliable data when the areas are not covered by snow
	JAN: monthly mean of global horizontal solar radiation for January
	FEB: monthly mean of global horizontal solar radiation for February
	MAR: monthly mean of global horizontal solar radiation for March
	APR: monthly mean of global horizontal solar radiation for April
	MAY: monthly mean of global horizontal solar radiation for May
	JUN: monthly mean of global horizontal solar radiation for June
	JUL: monthly mean of global horizontal solar radiation for July
	AUG: monthly mean of global horizontal solar radiation for August
	SEP: monthly mean of global horizontal solar radiation for September
	OCT: monthly mean of global horizontal solar radiation for October
	NOV: monthly mean of global horizontal solar radiation for November
	DEC: monthly mean of global horizontal solar radiation for December
	ANNUAL: annual mean of global horizontal solar radiation
	SPRING: seasonal mean of global horizontal solar radiation for Spring
	SUMMER: seasonal mean of global horizontal solar radiation for Summer
	FALL: seasonal mean of global horizontal solar radiation for Fall
	WINTER: seasonal mean of global horizontal solar radiation for Winter

Metadata Reference Information	
Metadata Date	August 05, 2009
Metadata Contact Organization	INPE - National Institute for Space Research
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