GUIDELINE

G1039-2

HANDBOOK FOR METEOROLOGICAL DATA FOR IALA SOLAR POWER SYSTEM CALCULATION TOOL

Edition 2.0
December 2017
Revisions to this IALA document are to be noted in the table prior to the issue of a revised document.

<table>
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<tr>
<th>Date</th>
<th>Details</th>
<th>Approval</th>
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<tr>
<td>December 2017</td>
<td>1st issue</td>
<td>Council 65</td>
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1 INTRODUCTION

The following description shows how to extract relevant data from a public NASA website. Another website to derive data from is http://re.jrc.ec.europa.eu/pvgis/apps4/pvest.php.

2 SHORT HANDBOOK FOR METEOROLOGY AND SOLAR ENERGY

<table>
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<td><a href="http://eosweb.larc.nasa.gov/sse/">http://eosweb.larc.nasa.gov/sse/</a></td>
<td>Click on the link at the left side to access the NASA’s website.</td>
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Step 1: Click on the link shown on the left side.

- over 200 satellite-derived meteorology and solar energy parameters
- monthly averaged from 22 years of data
- data tables for a particular location
- GIS Web Mapping Application & Services

Data Retrieval:
- Meteorology and Solar Energy
- GIS Web Mapping Application & Services
- Renewable Software Application Inputs

Join the SSE mailing list to receive updates about the SSE data archive.
### Description

**Join the SSE mailing list** to receive updates about the SSE data archive.

### Data Retrieval

**Meteorology and Solar Energy**

- **Data tables for a particular location**

  Tables of all SSE data set parameters for a single site.

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**Step 2:**

Click on the link shown on the left side.

- over 200 satellite-derived meteorology and solar energy parameters
- monthly averaged from 22 years of data
- data tables for a particular location
- GIS Web Mapping Application & Services

**Surface meteorology**

* A renewable energy resource

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**Step 3:**

Enter the geographical position where your AtoN is located.

To derive coordinates from a map you can use [http://www.latlong.net/](http://www.latlong.net/) (see short description at the end of the table).

Then press the button “Submit”.

In this example, it is used a location in Svalbard.

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**Example:**

| Latitude? | 76.246 |
| Longitude? | 16.552 |
### Step 4:
Select the headlines. Click on the link "Parameters" for more information and definition.

### Step 5:
Add more choices to suit your location. Select all parameters and press "Submit" button at the bottom.
Step 6:

Use parameters in “Monthly Average...” and subtract the percentage difference according to “Minimum” column below.

This must be done manually.

The result is passed into the IALA excel sheet.

Step 7:

Data from step 6 is to copied in this section at table ‘radiation & duration of night’ of the Excel sheet.
**Step 8:**

Use the value of NASA table for the monthly average hours of daylight, convert it into duration of night (= 24 – daylight hours) and copy them into the IALA excel sheet.

Example for the month of June are shown here.
3 GET LATITUDE AND LONGITUDE OF A SITE FROM A WEB-BASED MAP

Description | Action
--- | ---
http://www.latlong.net/ | Click on the link at the left side to access a free program online, to find a certain location.

Click the map and the position with respect. Latitude and longitude of the location you have selected is displayed.

**Shows latitude and longitude of the location you have chosen**

**Lat Long**

(62.764109, 6.408110)