

Service partner logos



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Other project partners



TMY Definition

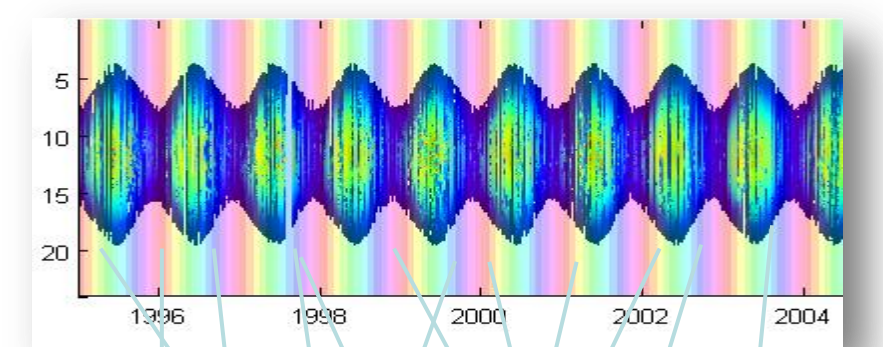
- TMY stands for **Typical Meteorological Year**. This is a set of one year of meteorological data which should be representative of a given weather situation.
- This graph on the right describes a set of 10 years of data: the years are in the x direction and the hours in the day in the y direction. The TMY generator selects for instance the month of January, then the month of February and so one... which has the highest probability (P50) to happen again in the future, representative of a typical situation. The resulting TMY is then a set of actual data.



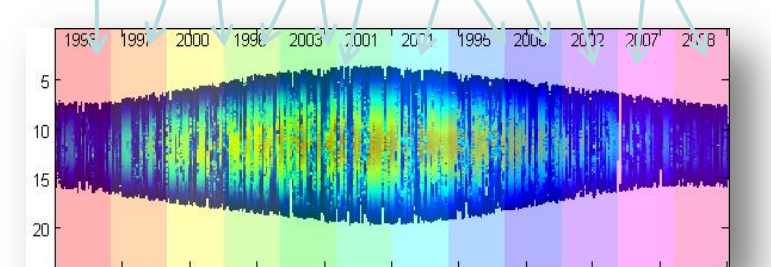
- A TMY, what for? TMYs are generally used as inputs to software for the simulation of the electrical yield of PV, CPV or CSP systems.



Inputs: e.g. 10 years of hourly values for a meteorological parameter (irradiation, wind speed...)

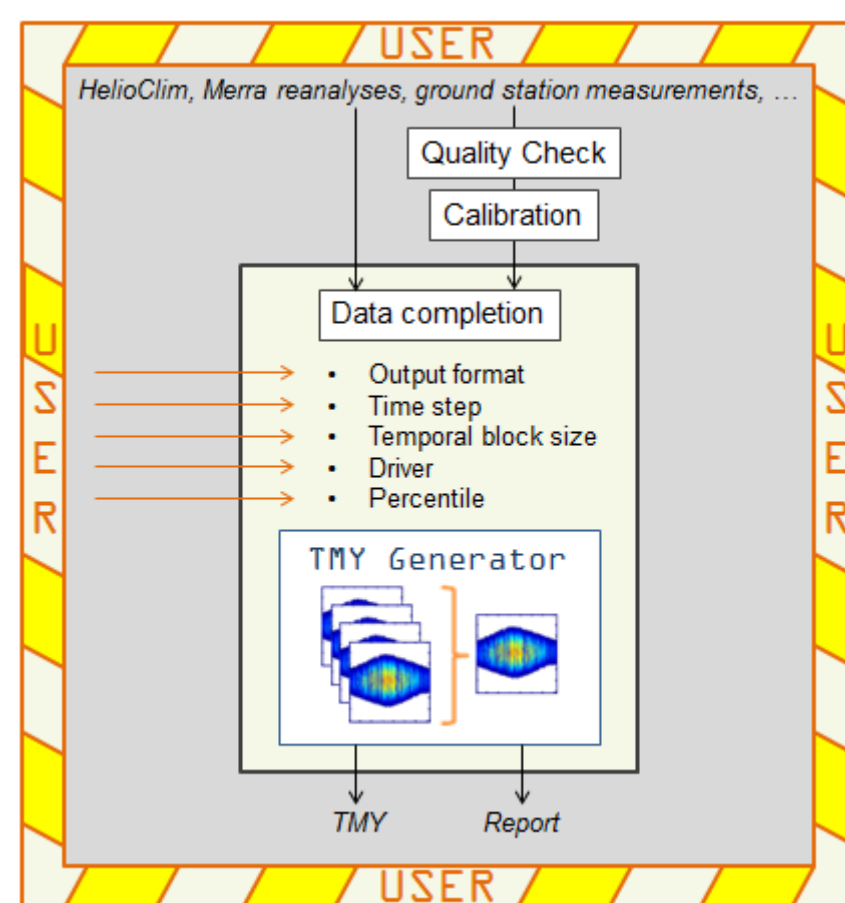


Selection of successive temporal samples (e.g. months or weeks) to build the TMY



TMY: synthetic year of real data

ENDORSE



Before ENDORSE

- A preliminary version of the service had been coded from a US publication, and a few TMYs had already been sold.
- ⇒ Prior to the project, the market was already existing for this service!
- ⇒ This early precursor raises a few weaknesses of the existing concepts: same TMYs for different solar technologies!, lack of information around the idea of TMY, lack of knowledge of the customers...

After ENDORSE: an operational service

- The service exploits several types of inputs, apply a full Quality Check on the input data and an efficient data completion tool.
- So far, the service provides a TMY and an associated report as a off-line service. A webservice will be available by the end of 2013 on the website: www.soda-is.com

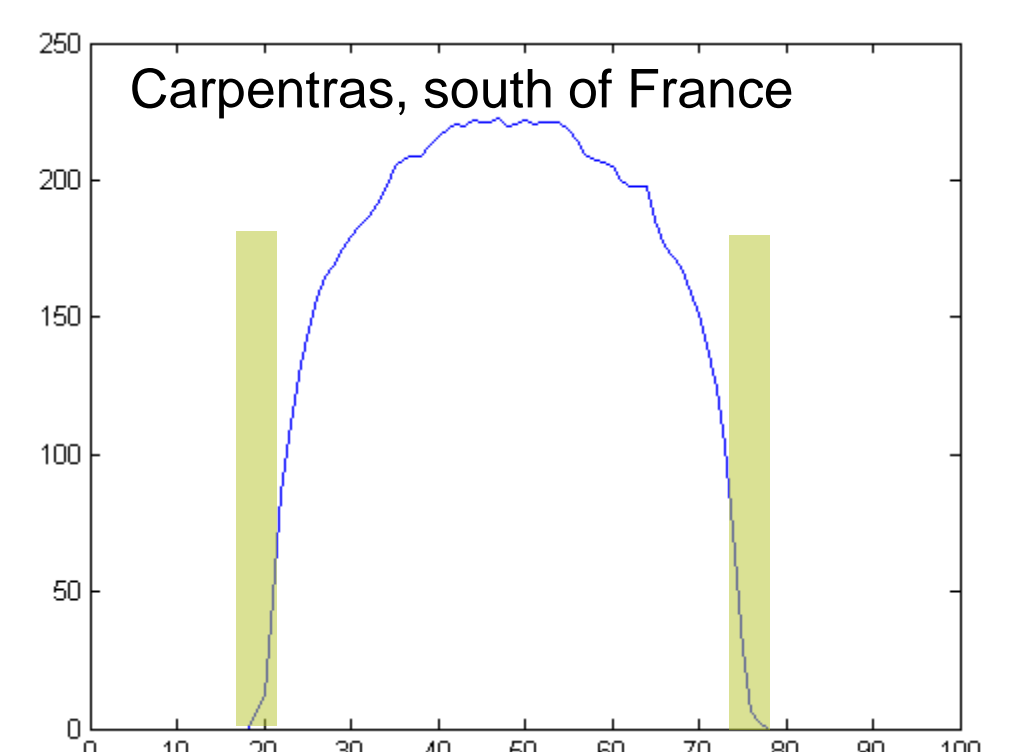
Main Innovations

The driver

- before the selection of representative set of data, the meteorological parameter are tailored (or adjusted) to the solar technology under interest, in order to select only the effective part of the radiation, temperature... for this specific system

■ LEGEND: The graph on the right side is an example of driver for a CPV system with backtracking when the sun is below 15° elevation angles: Blue curve: 1 minute Direct Normal Irradiation during a clear sky day of the summer 1997. Green rectangles: moment during the day when the sun is below 15° of elevation.

⇒ The 1 min DNI values are set to "0" before the generation of TMY, since this part of the radiation is not efficient for the solar technology under consideration.



A full report is also provided: TMY details + full method description