

Average and typical meteorological year (AY and TMY)

Webpage: <http://www.soda-pro.com/web-services/radiation/cams-radiation-service>

- Select a place
- Download 1-hour data for the period 2004-02-01 ----- 2024-01-31 (20 years)

AY

Calculate the AY (step 1h), e.g. calculate the average for Jan 1st, 00h for all 20 values etc

Output: the average year i.e. 365daysX24h

TMY:

For January, calculate the CDF from all January values (31daysX24h), so that you will get 20 CDFs.

Find the average from these 20 CDFs

Find the average difference of the 20 CDFs from the average

Find the CDF with the lower difference. This January is the representative one. The 1-h values of this January will be used for the TMY

Repeat the same with all months.

Fundamental difference between AY and TMY: the first is an average, the second is formed by real measurements.

Discuss the differences between AY and TMY at different time scales (per month, for the whole year)

Do this exercise **at least for GHI and BNI** (BHI and DHI are also available, as well as the clear sky values)