

Blanc Ph., Espinar B., Wald L.
ARMINES

WP4 - S4: typical meteorological year (TMY)
Meeting #4 – Session “products”



ENDORSE (Energy DOWnstReam SErvices)

Providing energy components for GMES

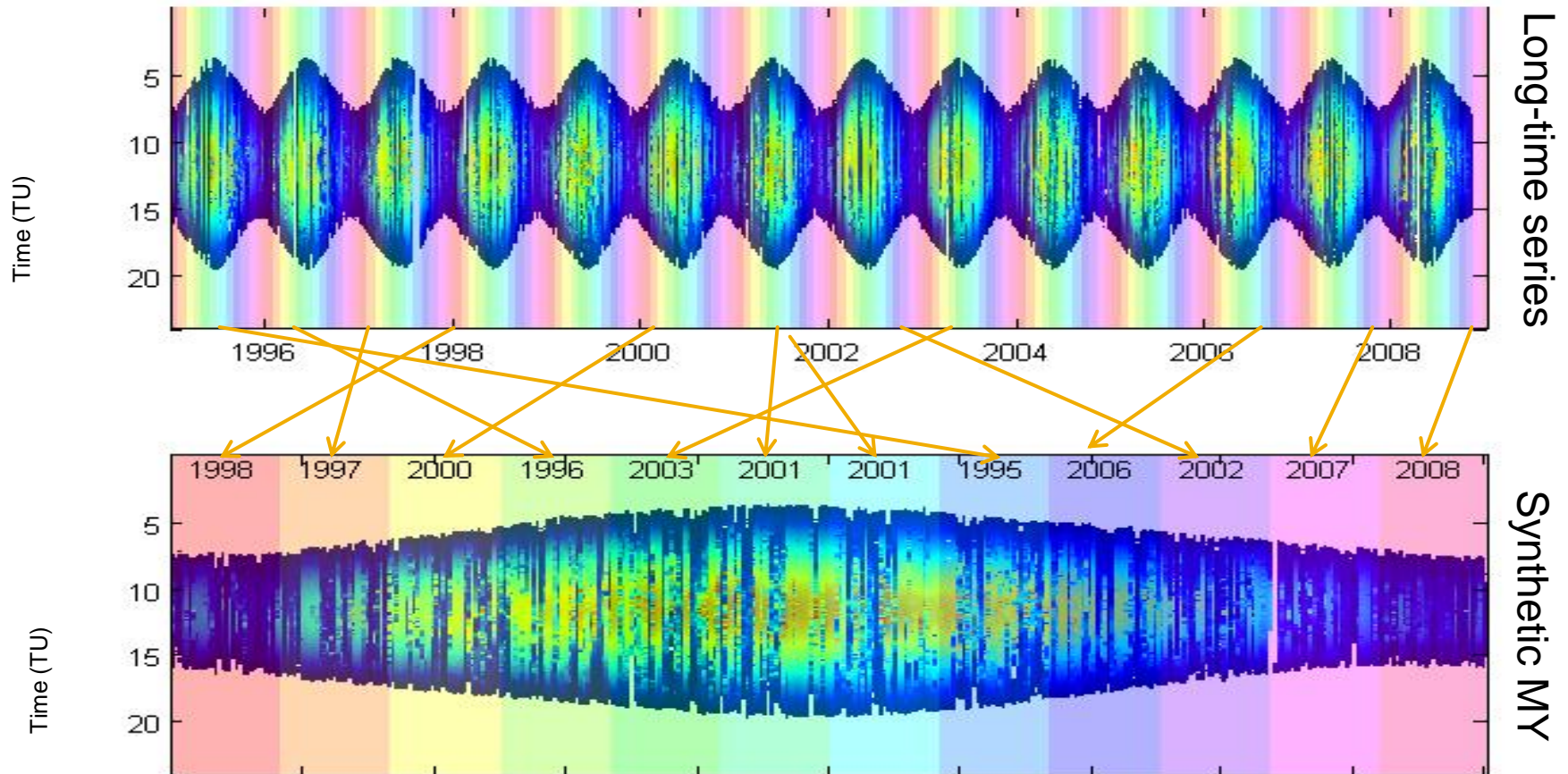
Meeting #4 ENDORSE



Typical meteorological year (TMY)

Example of TMY (only the GHI irradiation)
 Each colored rectangle corresponds to a month

Year



Feedback from prime user's

- Mr. Clément (French consultant in the PV domain)
 - Very enthusiast!
 - He proposes the use sets of MY (with different levels of percentiles) as references for controlling the PV production in a daily or weekly basis (sometimes PV-system operator remarks a fault in the PV plant after several months of malfunctioning because there is no reference to compare the production).
 - From his point of view
 - P₅₀ and P₉₀ (the optimistic case) may be useful in a daily even weekly-based blocks.
 - P₁₀ (the pessimistic case) is useful in a monthly-based block.
 - About the way to assess the TMY and the percentile-MY with respect to the long-term time series (bar-graphics and cumulative distribution functions) he thinks is a very illustrative way to understand what a MY and its corresponding percentiles are.

Feedback from prime user's

- TOTAL Gas & Power, Dpt. R&D – Concentrated Solar Technologies
 - Also rather enthusiast.
 - Interested in comparing the variability in production estimation capabilities of MY ranging from daily-based, weekly-based and monthly-based blocks.
 - They propose to include the selling price of electricity in the Driver for the MY generation.

- SUNPOWER (in collaboration with TOTAL)
 - Not so enthusiast for using TMY.
 - It will be interest to include in the report the uncertainty of original data from which the MY will be generated.
 - They would like to have an idea about the effect of the number of years used in the MY generation.
 - Very good idea that this MY generation is aimed at any type of energy production system. It is a “typical production year” not a ‘typical meteorological year’.

Feedback from prime user's

- Sunpower (continuation)
 - Scepticism about the possibility to integrate in the "Driver" some characteristics like the efficiency of PV panels with solar radiation.
 - They would like to have an illustration of the efficiency of MY used as energy production estimation "method", like a comparison in production estimation between "classical" TMY from n-years of actual data and our P50 MY repeated n-times.
 - Study about the impact in the MY (P50, P10 and P90) generation from different blocs (weekly, monthly).
 - It will be appreciated a study about the impact of selection of TMY generation method.
 - They think the bar-graphics are a very good idea for assessing meteorological years.