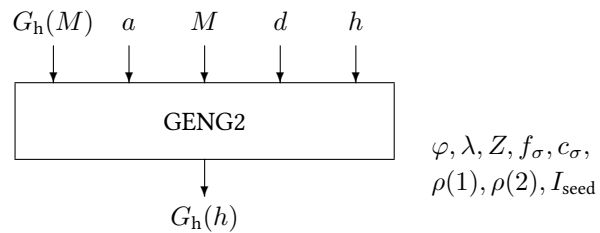


Block GENG2

The GENG2 block generates a series of hourly global radiation data from monthly mean values.

Internally, it simply calls [GENG](#) which uses an old convention for timezone and longitude.



Name	GENG2
Function	em0115
Inputs	5 ... [6]
Outputs	1
Parameters	8
Strings	0
Group	S

Inputs

- 1 Monthly mean value $G_h(M)$ / W m^{-2} of global radiation on a horizontal plane
- 2 Year a
- 3 Month $M \in [1, 12]$
- 4 Day $d \in [1, 31]$
- 5 Hour $h \in [0, 23]$
- 6 Minute $m \in [0, 59]$

Outputs

- 1 Hourly mean value $G_h(h)$ / W m^{-2} of global radiation on a horizontal plane. When input six is connected, GENG2 performs a linear interpolation between the two corresponding hours.

Parameters

- 1 Latitude $\varphi \in [-90^\circ, +90^\circ]$, northern hemisphere positive
- 2 Longitude $\lambda \in [-180^\circ, 180^\circ]$, **east of Greenwich**; values west of Greenwich may be used with a minus sign

- 3 UTC Time zone $Z \in [-12, 12]$, Greenwich Mean Time $Z = 0$, Central European Time $Z = +1$.
- 4 Variance factor f_σ to the Gordon / Reddy correlation, eq ??; if unknown $f_\sigma = 1$ is recommended
- 5 Coefficient c_σ corresponding to the year-to-year variability due to different climatic conditions. When c_σ is set to zero the year-to-year variability is omitted. $c_\sigma = 0.185$ approximates North American variability, while $c_\sigma = 0.3$ approximates European variability
- 6 Autocorrelation coefficient $\rho(1)$ at a lag of one day; if unknown $\rho(1) = 0.3$ is recommended
- 7 Autocorrelation coefficient $\rho(2)$ at a lag of two days; if unknown $\rho(2) = 0.57\rho(1)$ is recommended
- 8 Initialization I_{seed} of random number generator

Strings

None
