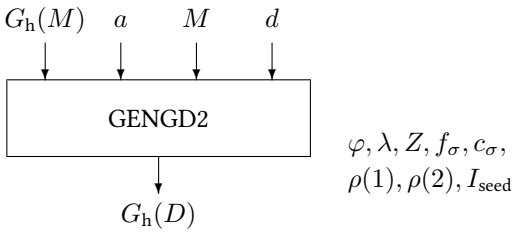
Block GENGD2

The GENGD2 block generates a series of daily global radiation data from monthly mean values.

Internally, it simply calls GENGD which uses an old convention for timezone and longitude.





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Inputs

1 Monthly mean value $G_\mathrm{h}(M)$ / W m^{-2} of global radiation on a horizontal plane
2 Year a
3 Month $M \in [1, 12]$
4 Day $d \in [1, 31]$

Outputs

1 Daily mean value $G_\mathrm{h}(d)$ / W m^{-2} of global radiation on a horizontal plane

Parameters

1 Model
  0 Gordon Reddy model
  1 Aguiar Collares-Pereira model
2 Latitude $\varphi \in [-90°, +90°]$, northern hemisphere positive
3 Longitude $\lambda \in [-180°, 180°)$, **east of Greenwich**; values west of Greenwich may be used with a minus sign

4	UTC Time zone $Z \in [-12, 12]$, Greenwich Mean Time $Z = 0$, Central European Time $Z = +1$.
5	Variance factor f_σ to the Gordon / Reddy correlation; if unknown $f_\sigma = 1$ is recommended
6	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
7	Autocorrelation coefficient $\rho(1)$ at a lag of one day; if unknown $\rho(1) = 0.3$ is recommended
8	Autocorrelation coefficient $\rho(2)$ at a lag of two days; if unknown $\rho(2) = 0.57\rho(1)$ is recommended
9	Initialization I_{seed} of random number generator 0 for a different random sequence at each run

Strings

None