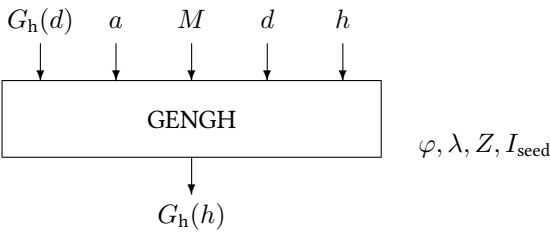


Block GENGH

Warning: The explicit usage of this block is deprecated, because it uses a west-positive convention for longitudes.

Please use [GENGH2](#) instead, with east-positive longitudes. GENGH is still used internally by GENGH2.

The GENGH block generates a series of hourly global radiation data from daily mean values.



Name	GENGH
Function	em0017
Inputs	5 ... [6]
Outputs	1
Parameters	4
Strings	0
Group	S

Inputs

- 1 Daily mean value $G_h(d)$ / 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, GENGH performs a linear interpolation between the two corresponding hours.

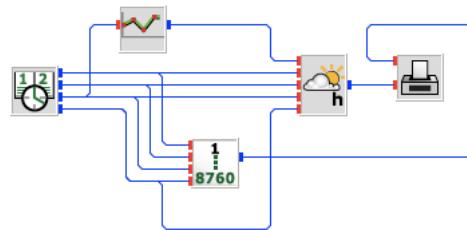
Parameters

- 1 Latitude $\varphi \in [-90^\circ, +90^\circ]$, northern hemisphere positive
- 2 Longitude $\lambda \in [0^\circ, 360^\circ)$, west of Greenwich; values east of Greenwich may be used with a minus sign
- 3 Time zone $Z \in [0, 23]$, Greenwich Mean Time $Z = 0$, Central European Time $Z = 23$.
- 4 Initialization I_{seed} of random number generator

Strings

None

gengh.vseit

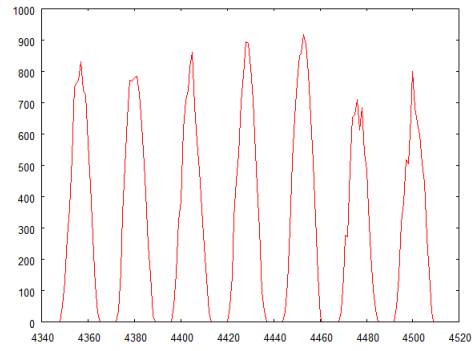


A **CLOCK** block runs through the first week of July 2010 in steps of one hour and a **POLYG** block with the parameters

7	
1.00	301.03
2.00	302.37
3.00	295.50
4.00	321.24
5.00	344.02
6.00	254.34
7.00	272.85

provides daily means of global radiation data, which are expanded by the **GENGH** block to hourly values for the location of Stuttgart, Germany.

An hour of the year block **HOY** is used as x -coordinate by the **PLOT** block which displays the generated irradiance data time series.



See also Blocks [GENG](#) and [GENGD](#).