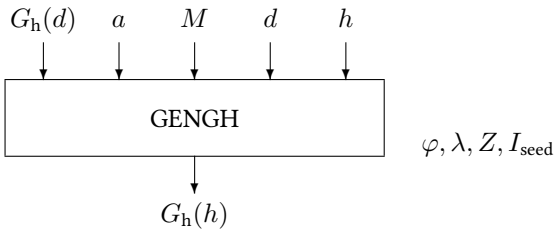
Block GENGH

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 $G_\mathrm{h}(d)$ / 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 $G_\mathrm{h}(h)$ / 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

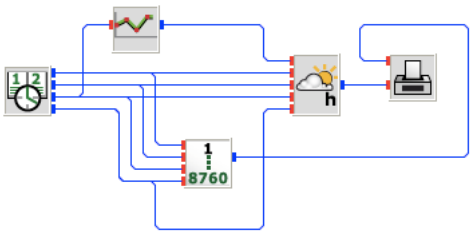
1 Latitude $\varphi \in [-90°, +90°]$, northern hemisphere positive
2 Longitude $\lambda \in [0°, 360°)$, west of Greenwich; values east of Greenwich may be used with a minus sign
3 Time zone $Z \in [0, 23]$, Greenwich Mean Time $Z = 0$, Central European Time $Z = 23$.
4 Initialization I_{seed} of random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

Strings

None

---

gengh.vseit

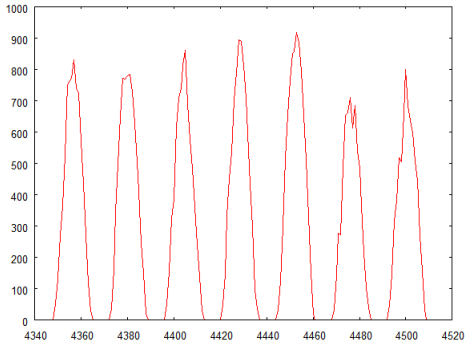


A CLOCK block runs through the first week of July 2010 in steps of one hour and a POLYG block with the parameters

```
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.