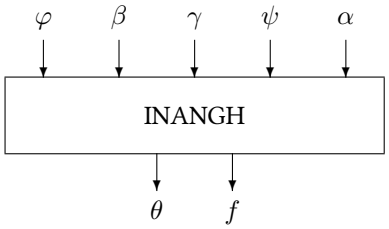
Block INANGH

The INANGH block calculates the incidence angle of beam radiation on an arbitrarily oriented plane, when the position of the Sun is given in horizon coordinates.





Name	INANGH
Function	em0007
Inputs	5
Outputs	2
Parameters	0
Strings	0
Group	S

Inputs

1 Latitude $\varphi \in [-90°, +90°]$, northern hemisphere positive
2 Slope β / °
3 Azimuth angle of the surface γ (north $= 0°$, east $= 90° \ldots$ west $= 270°$)
4 Azimuth angle of the Sun ψ / °
5 Elevation of the Sun α / °

Outputs

1 Incidence angle θ / ° between beam radiation and surface normal
2 Flag f set to one, when Sun is over the horizon, set to zero otherwise

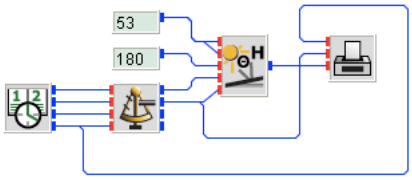
Parameters

None

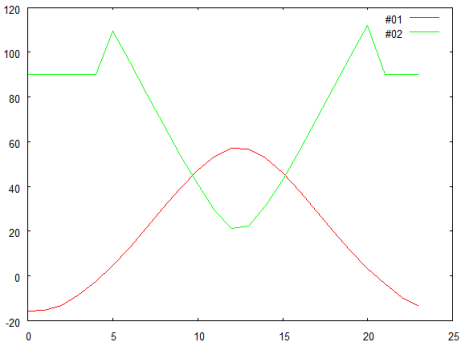
Strings

None

inangh.vseit



This is exactly the same example as the one presented for INANGE with the exception that now the calculation of the Solar position uses horizon coordinates. Surprising enough, the graph displayed by the PLOT block is different for the night hours.



See also Block INANGE.