SWobs.txt

Shortwave radiation is an optional forcing data. It can be used for calculation of snow melt, ice on lake and rivers and potential evaporation. Some of the available model options for these processes depend on shortwave radiation, and use it either from this file or approximated from other input data.

The file is located in the `forcingdir` folder. Shortwave radiation (MJ/m^2/d) is given for all time steps. The *SWobs-file* is read only if `readswobs` is set in info.txt.

The file may have comment rows in the beginning of the file. These rows have to begin with `!!`. The first row read is column headings. It holds a text string (e.g. 'date', no spaces allowed) for the first column, and integers in the form of station or subbasin ID numbers for the rest of the columns.

The first column is date-time. The default format is yyyy-mm-dd [HH:MM], where hour and minutes are necessary if the timestep is shorter than one day. The date-time is the beginning of the timestep. It is possible to use another date-time format: yyyymmdd[HHMM]. It is expected for all forcing files, if `readformat 1` is set in info.txt.

The second to last columns are radiation for all stations or subbasins. The ID number (first row) may be `swobsid` or `subid`. If `swobsid` is used, several subbasins may use the same radiation time series. `subid` is defined in GeoData.txt. The order of subbasins in *SWobs.txt* does not have to be same as in GeoData.txt. `swobsid` may be defined in ForcKey.txt.

Example snippet of *SWobs.txt* file:

```
date          1234   1245
1990-01-01    0.7      0.75
1990-01-02    0.8      0.65
...
```

SWobs_nnn.txt holds shortwave radiation forcing data for sequence with seqnr nnn. For seqnr 0 *SWobs.txt* is used.