

# Xobs.txt

The file is used for introducing time series of several different variables into the model. The time series can be observations used for evaluation of the model, e.g. rswe snow water equivalent. A few of the time series can be used as forcing data, i.e. concentrations of precipitation and observed potential evaporation (repo).

The file is located in the `otherobsdir` folder set in [info.txt](#). If the path is not set, the file is searched for in `forcingdir`. File should include a continuous time period of values for each time step, which doesn't need to cover the whole simulation time period. Missing values should be given as -9999.

The first row(s) may be comment rows. These rows have to start with `!!`. At least one comment row is needed. The first row, not a comment row, gives the variable names. For the first column, the date column, the name "date" can be used (no name may not be omitted). The third row gives which subbasin (subid in [GeoData.txt](#)) the column's data is given for. The date column may in this case belong to subbasin 0 (may not be omitted). The first column is date in format yyyy-mm-dd [HH:MM]. If set in [info.txt](#) that matlab-format should be read (readformat 1) the date format is yyyyymmdd[HHMM]. Second to last columns are data columns.

Example snippet of *Xobs.txt* file:

```
!!Comment, this file hold observed snow water equivalent
date      rswe  rswe  ...
0         1234  1245  ...
1990-01-01 0     0     ...
1990-01-02 1     5.5   ...
...
```

Observation variables that can be given in *Xobs.txt* are tabled [here](#). They are a selection of the complete [HYPE variables](#).

Column **Agg.** indicates the type of aggregation of the variables. The type determines how the variable is treated when asked for as an output variable or in a criterion calculation. The `meanperiod` of the output/criterion determines the period over which the variables values will be aggregated. They will be averaged, weight-averaged or summed according to the type of aggregation. The weight-averaged variables are weighted with the flow/water volume that they are associated to. For the concentration of precipitation that is `prec` and for the flow concentrations `rout`. Similarly variable values in *Xobs.txt* represent either averages, weighted averages, or sums over the timestep.