Snow state file

Name:

The name is expected to be of the format Snow.State.`<MM.DD.YYYY.hh.mm.ss>`.`<ext>`, where `<MM.DD.YYYY.hh.mm.ss>` is the time for which the model state is valid, and `<ext>` is either `bin (Format = BINARY or Format = BYTESWAP)` or `nc(Format= NETCDF)`. The file is located in the `Initial state directory`.

Read by:

`InitModelState()`

Format:

A series of 2D matrices.

Purpose:

Contains the model state associated with snow variables. This allows a model restart with exactly the same initial conditions.

Comments:

The state files are not meant for analysis. They are difficult to read unless you write some dedicated program or script. However, if you use `Format = NETCDF,` the files are readable by any program that reads and displays NetCDF files.

Details:

The snow state file contains the following state variables, which **MUST** be in the order specified if you use the binary format. For the NetCDF files the order is arbitrary, as long as you provide the correct variable names.

If the format is `BIN` or `BYTESWAP,` the variables are:

1. Whether snow is present (1) or absent (0) (float)
2. Number of days since last snowfall (float)
3. Snow water equivalent in m (float)
4. Water content of the bottom snow pack layer in m (float)
5. Temperature of the bottom snow pack layer in °C (float)

6. Water content of the top snow pack layer in m (float)
7. Temperature of the top snow pack layer in °C (float)
8. Cold content of the entire snow pack in J(float)

If the format is `NETCDF`, the variables are:

1. Whether snow is present (1) or absent (0).
   The variable name is `Snow.HasSnow`.
   The number type is `NC_FLOAT`.

2. Number of days since last snowfall.
   The variable name is `Snow.LastSnow`.
   The number type is `NC_FLOAT`.

3. Snow water equivalent in m.
   The variable name is `Snow.Swq`.
   The number type is `NC_FLOAT`.

4. Water content of the bottom snow pack layer in m.
   The variable name is `Snow.PackWater`.
   The number type is `NC_FLOAT`.

5. Temperature of the bottom snow pack layer in °C.
   The variable name is `Snow.TPack`.
   The number type is `NC_FLOAT`.

6. Water content of the top snow pack layer in m.
   The variable name is `Snow.SurfWater`.
   The number type is `NC_FLOAT`.

7. Temperature of the top snow pack layer in °C.
   The variable name is `Snow.TSurf`.
   The number type is `NC_FLOAT`.

8. Cold content of the entire snow pack in J.
   The variable name is `Snow.ColdContent`.
   The number type is `NC_FLOAT`.