

Sapflow-Measurement

PROSA Demo Software



PROSA is used to organize monitoring data and to calculate sapflow density and sapflow (if sapflow area is known) from sapflow sensors.

PROSA deals with datafiles from Skye Datalogs and DeltaT DL2e Datalogger. (Other logger-formats on request)

The licence agreement is linked to the hardware. This means: when you choose the registry button you link your software-licence to your actual hardware – and you are not allowed to run it on any other hardware regularly – inspite of testing or inspite you order a group licence for more than one computer.

But before you register the software you can use it ten times for trial on any computer you like to.

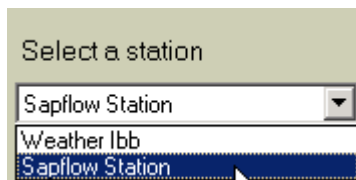
First run self-extracting file. And then start setup.exe

Open LOGSTAR.INI and enter the code for your language (german or english is available).

Check that your windows is using decimal point as delimiter.

Start the program from desktop or from directory: LOGSTAR.EXE.

After your first installation two demo stations are already installed (you may delete them later):



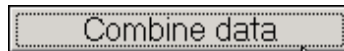
Choose Sapflow Station to test the PROSA-functions. There should be an archiv datafile for this station.

Use F1 to get context sensitive help (not included in email – version)

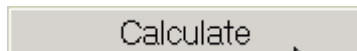
First choose



and then open from .\archiv directory the demo dataset 010606ws.dat. (this is a DL2e raw datafile). The convert data function will produce dayfiles in .\data. If you would convert more raw datafiles it will combine half days correctly to one complete dayfile.



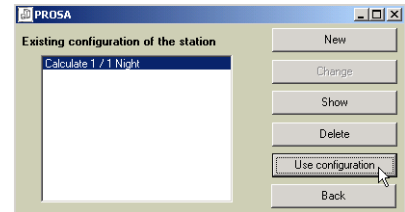
Use combine data to group several dayfiles to one dataset. The result is saved in .\statistik\zeitraum.dat. You can export the last file directly to excel using the excel button. Check your Excel-windows-path in logstar.ini when Excel will not start.



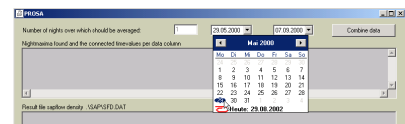
Use calculate to start the sapflow calculation. You can choose from a list of configuration types. The configuration sets the following features (check with show):

- How many night maxima will be averaged to calculate the night maximum for the formula
- Default night maximum for each channel, when there are no night data
- Sapflow area for each channel
- All other channels will be kept unchanged in the outputfile (marked with # in the configuration setup).
- Channel description and mode is set when a new station is defined. Mode 1 means this is a sapflow channel. Other channel will be kept unchanged from PROSA calculations.

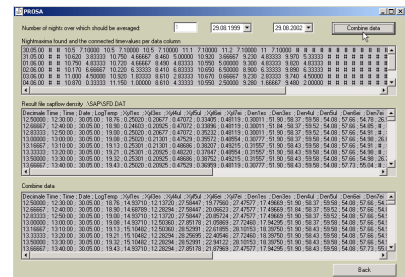
Mark the configuration and start with Use configuration.



First define your time of interest (select several years and you will find the demo data easily).



Then start the calculation with combine data button. You get a message how many dayfiles have been found.



The first window shows all nightmaxima and the timestamp where they have been detected. PROSA searches nightmaxima only between 19:00 and 7:00 o'clock in the morning. (check that your datalogger is running with realistic time stamps)

The second window shows the sapflowdensity in [ml/(cm²xmin¹)]

$$U = 0.714x((dT_{\text{night}}/dT_{\text{actual}})-1)^{1.231}$$

The last window shows the sapflow calculated with the sapflow area you entered for each channel.

The last results are stored in ASCII Files in your subdirectory .\SAP for further usage.