



Tarfala Research Station automatic weather station, 1989

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1 Instrumentation

The TRS met station consisted of the following instruments during 1989

Sensor	Serial number	Remark
T/Rh		at 2 m
Young Wind Monitor		at 3 m
LiCor Li-200SB pyranometer		at 2 m
CS Q-7 net radiometer		at 2 m
Tipping bucket precipitation gauge		at 2 m
CR21X data logger		

2 Notes on the station data

- NOTE 3-hr sampling of data during winter, 1-hr sampling during summer.
- No daily summaries available.
- No original downloaded data files exist.
- Data is gathered from files extracted from the original data.

3 Data coverage

No data exists for the period 1989-01-01 01:00:00 to 1989-07-01 00:00:00.

4 Notes on data storage

Example data line for hourly data:

1989,184,1300,4.8,50,2.3,1.1,250,56.8,123.6,120.6,81,0.16,1.92

Column	Example data	Description
01:	1989	Year
02:	184	Day of Year
03:	1300	Hour-minute (hhmm)
04:	4.8	2 Young screen (T/Rh)
05:	50	3 Young screen relative humidity (T/Rh)
06:	2.3	4 Mean horizontal wind speed
07:	1.1	5 Resultant mean wind speed
08:	250	6 resultant mean wind direction
09:	56.8	7 Standard deviation of wind direction
10:	123.6	8 Global radiation
11:	120.6	9 net radiation
12:	81	10 Standard deviation of net radiation
13:	0.16	11 Precipitation
14:	1.92	12 Max intensity precip ???

5 Data files and content

TRSmnet1989.csv

Raw data file

TRS_met_1989_Precipitation.csv

Date-time, hourly totalized P

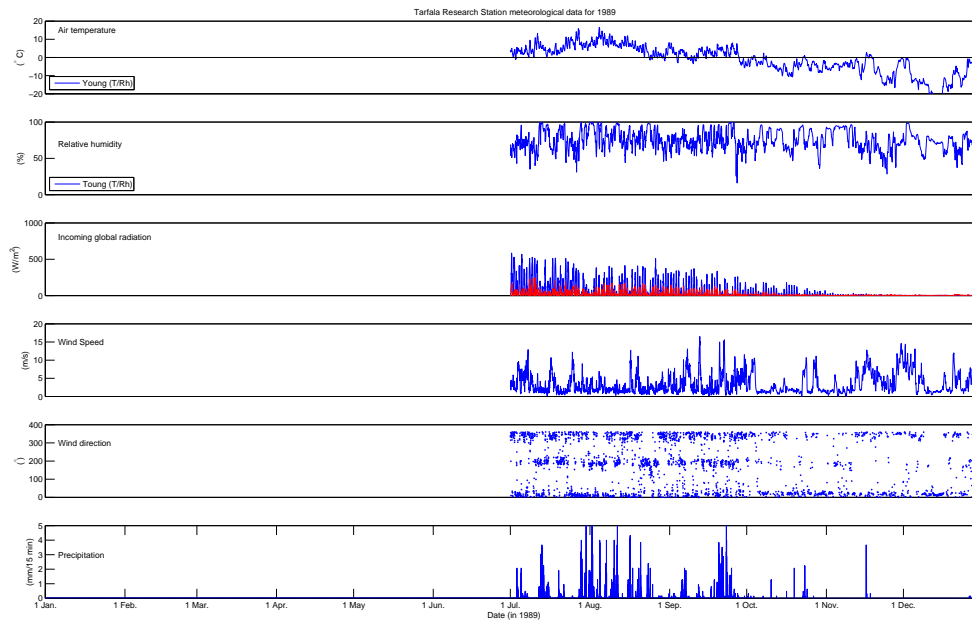


Figure 1. Summary of meteorological data from Tarfala Research Station automatic weather station 1989.

1989-07-01 01:00:00,0.00

TRS_met_1989_Radiation.csv

Date-time, Global radiation, Net radiation, Standard deviation of net radiation?

1989-07-01 01:00:00,6.50,-27.00,10.30

TRS_met_1989_Relative_humidity.csv

Date-time, hourly average Rh

1989-07-01 01:00:00,67.2

TRS_met_1989_Temperature.csv

Date-time, hourly average T

1989-07-01 01:00:00,3.40

TRS_met_1989_Wind.csv

Date-time, Mean horizontal wind speed, Resultant mean wind speed, resultant mean wind direction, Standard deviation of wind direction

1989-07-01 01:00:00,2.6,1.8,334.0,43.4

The data collected during 1989 is summarized the figure 1 and Table 1.

Logger program

No logger program exists for this year.

Table. 1. Monthly averages of meteorological parameters from the Tarfala Research Station automatic weather station 1989.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Average air temperature												
(°C)	—	—	—	—	—	—	5.3	6.0	2.1	−4.3	−5.7	−11.2
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255
Average relative humidity												
(%)	—	—	—	—	—	—	73.9	79.8	74.1	73.1	73.7	71.8
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255
Positive degree sum												
(°C)	—	—	—	—	—	—	3973	4663	1921	13	20	0
<i>n</i>	—	—	—	—	—	—	732	727	569	18	17	0
Average incoming global radiation												
(W m ^{−2})	—	—	—	—	—	—	128.8	71.7	53.9	25.8	3.9	1.5
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255
Global incoming energy sum												
(W m ^{−2})	—	—	—	—	—	—	95693	55031	40039	6990	975	380
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255
Average net radiation												
(W m ^{−2})	—	—	—	—	—	—	72005	42692	23882	−3584	−3175	−2477
<i>n</i>	—	—	—	—	—	—	707	762	743	271	247	255
Totalized precipitation												
(mm)	—	—	—	—	—	—	135.68	192.80	131.36	10.72	5.92	1.12
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255
Average wind speed												
(m s ^{−1})	—	—	—	—	—	—	3.3	2.4	4.0	3.2	4.3	4.9
<i>n</i>	—	—	—	—	—	—	743	767	743	271	247	255