Analysis of high gas concentration and flux measurements at Swiss Beromünster tall tower (Supplementary material)

Plach et al., 2022

1 Data availability
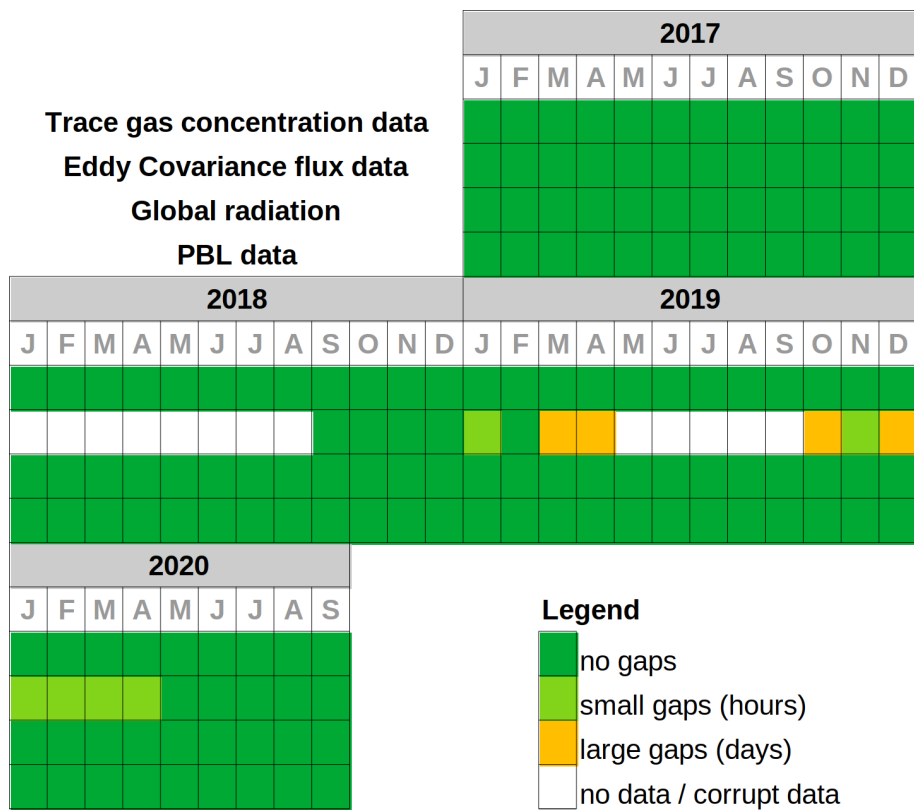
Figure S1: **Overview of data availability of key variables** used in the corresponding paper in the period of interest 2017 to 2020. For further details on the data used, see the method section of the corresponding paper.

2 Global radiation data
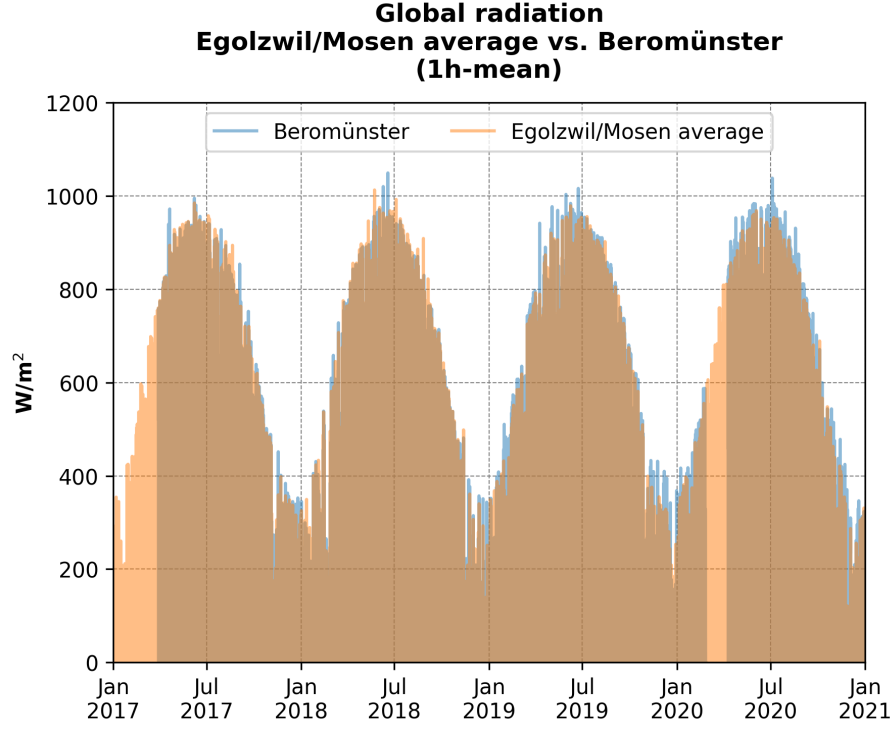
Figure S2: **Comparison of the used global radiation (average of two MeteoSwiss stations — Egolzwil and Mosen) and measurements directly at Beromünster.** Egolzwil/Mosen and Beromünster data is available at a 10-min and 1-hourly resolution, respectively. For the comparison both data sets are averaged to 1-hourly means. The global radiation data is used for the flux gap-filling procedure (see method section of the corresponding paper).

3   Overview plots - Wind roses
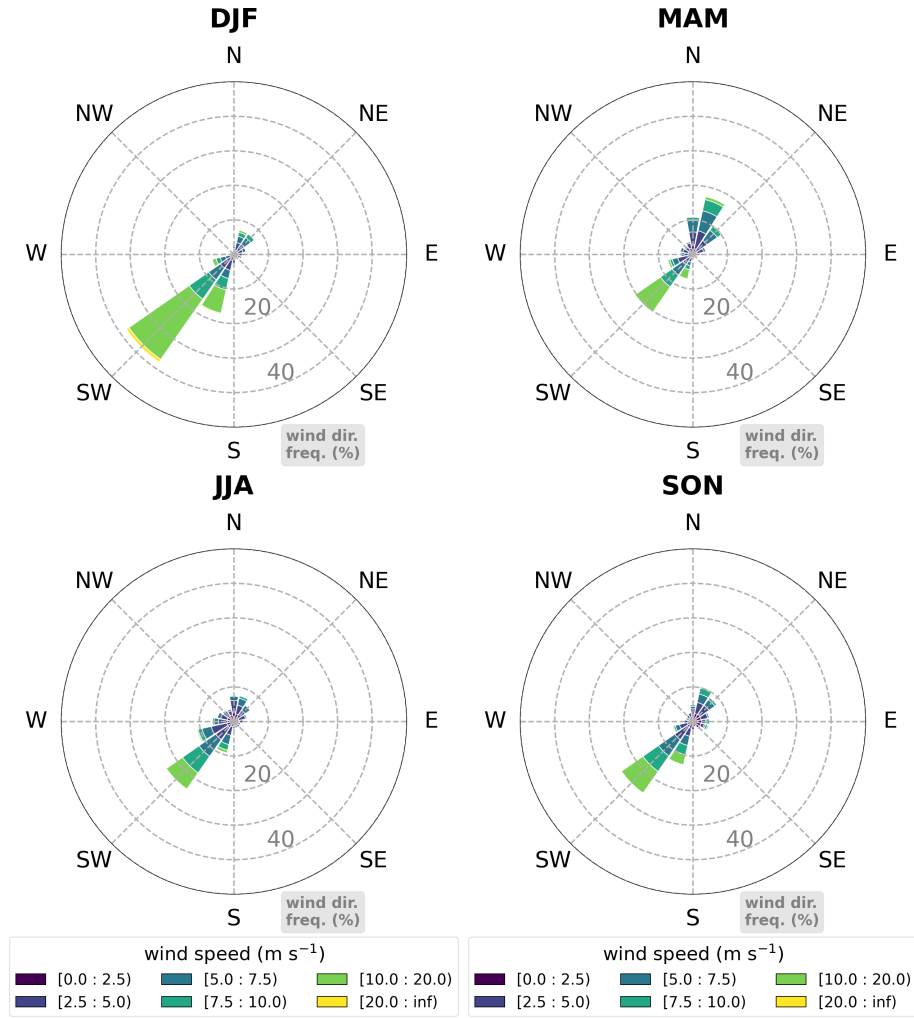
Figure S3: **Wind roses for the Beromünster site** (entire data set) **divided by season**: winter (DJF), spring (MAM), summer (JJA), fall (SON).
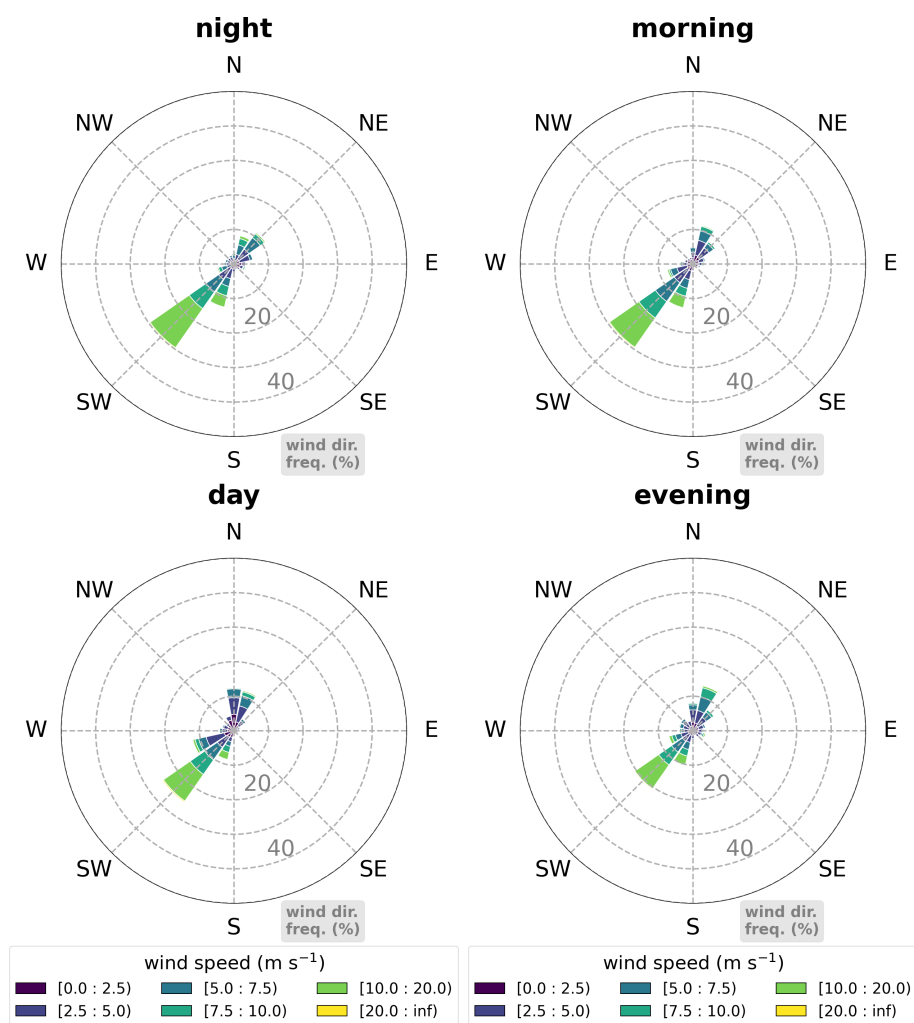
Figure S4: **Wind roses for the Beromünster site** (entire data set) **divided by time of day**: night, morning, day, evening. For details on the hours included in the respective periods see the method section of the corresponding paper.
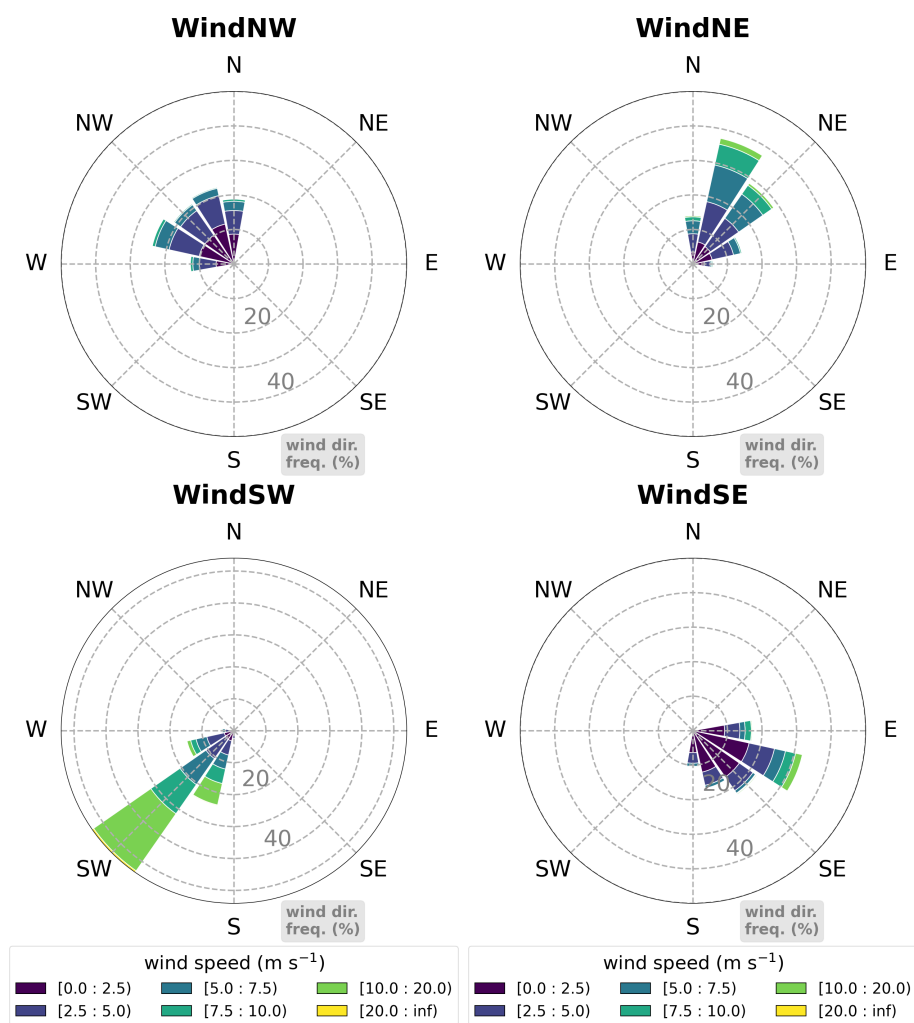
Figure S5: **Wind roses for the Beromünster site** (entire data set) **divided by wind direction**: WindNW, WindNE, WindSW, WindSE. For details on data separation see the method section of the corresponding paper.

4 Overview plots - Other meteorological data
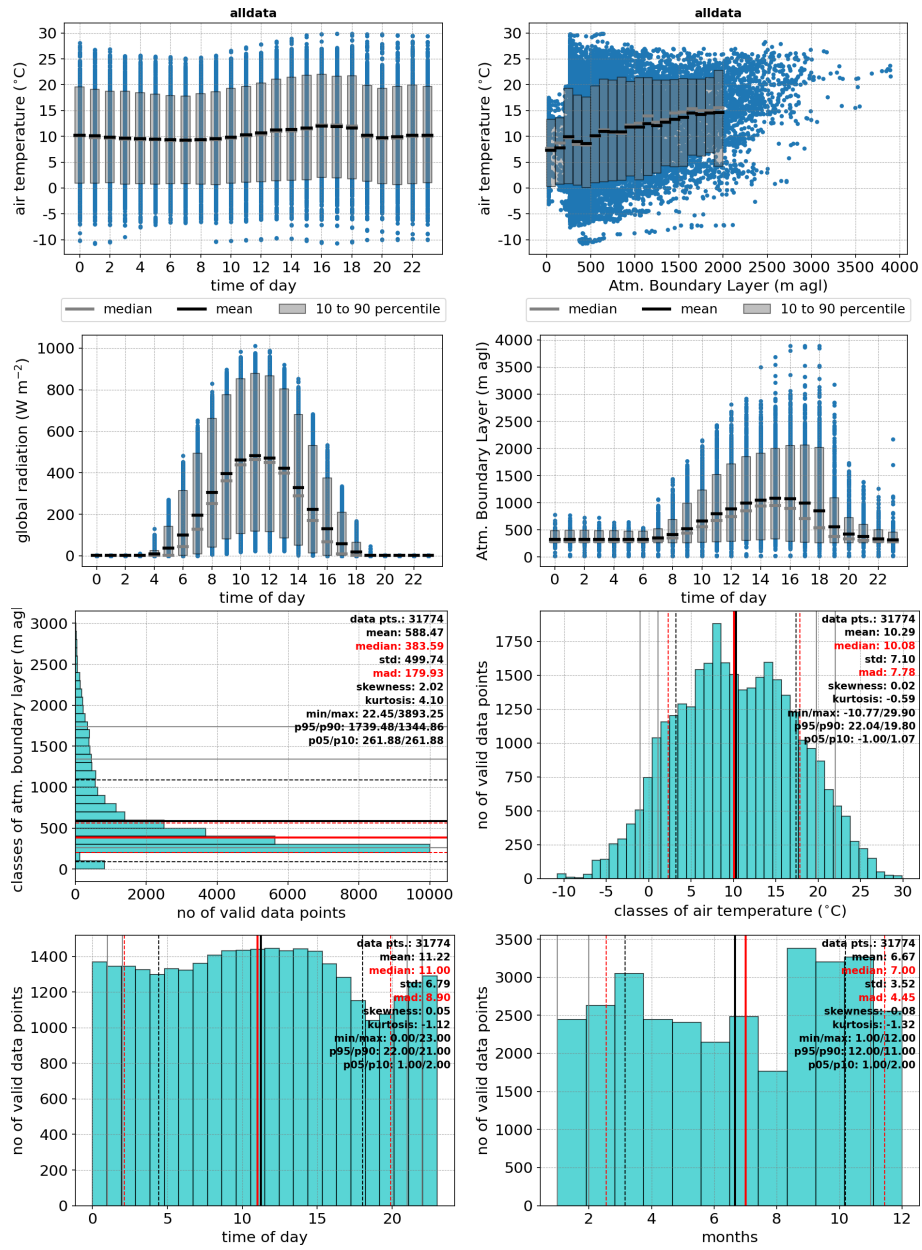
Figure S6: Overview plots for **additional meteorological variables** (entire data set): **alldata**
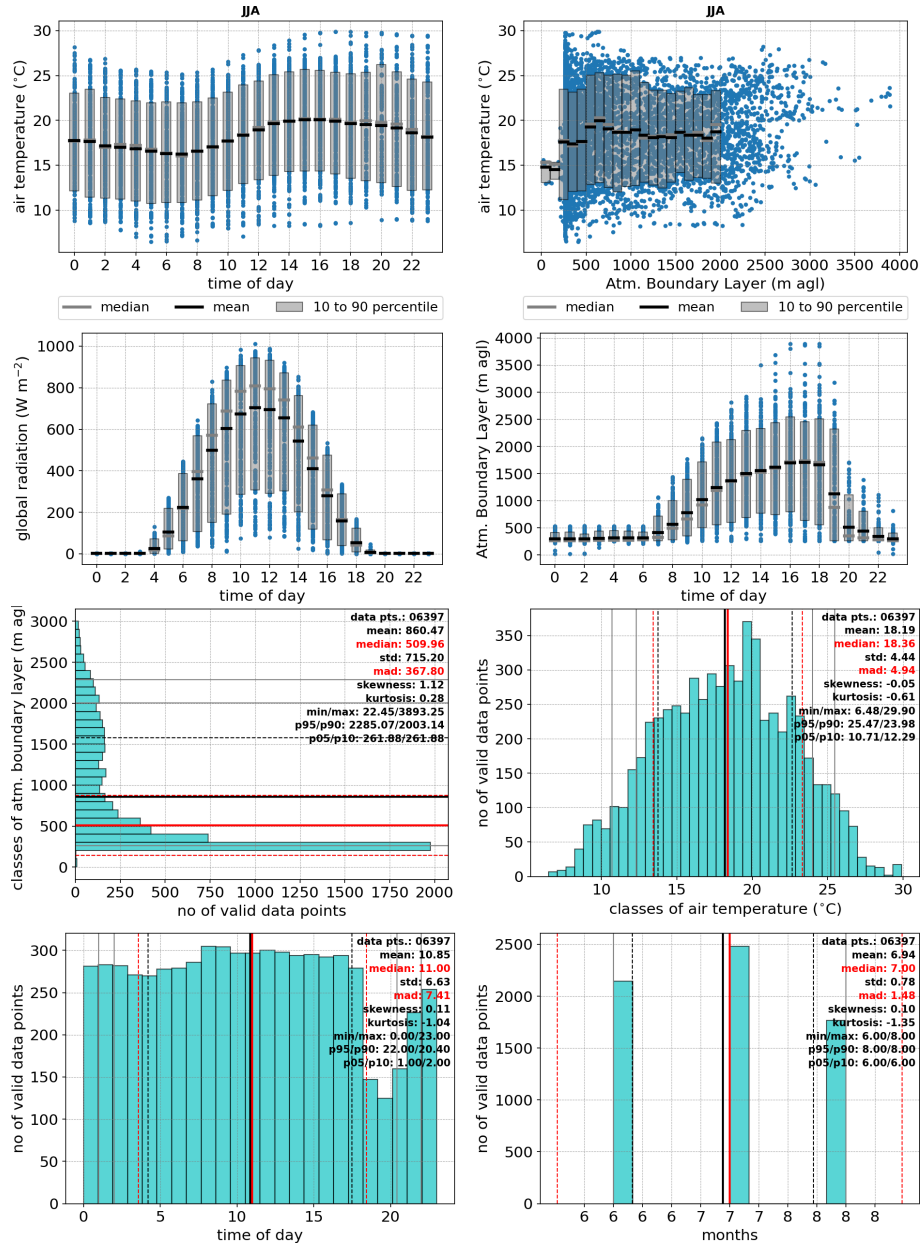
Figure S7: Overview plots for **additional meteorological variables** (entire data set): **summer (JJA)**
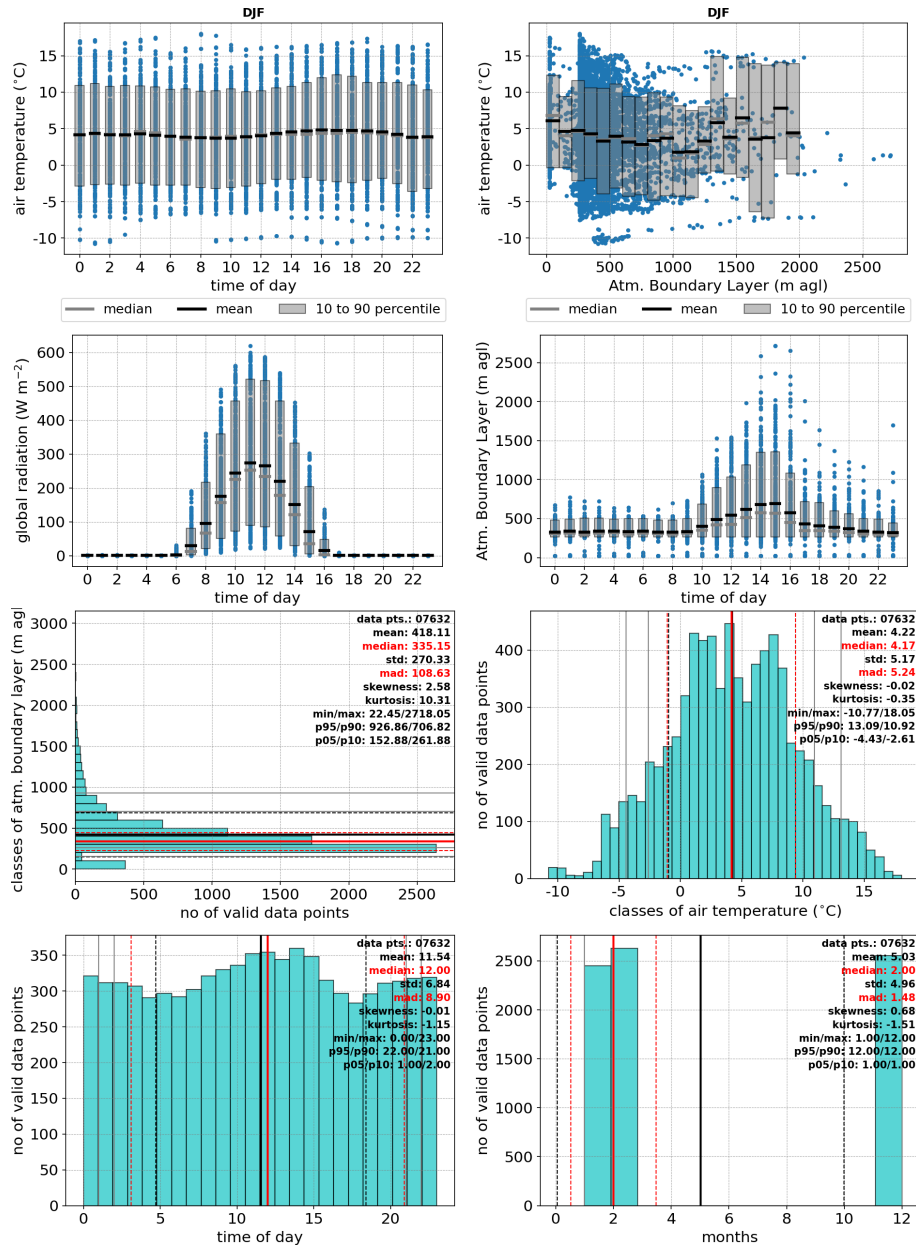
Figure S8: Overview plots for **additional meteorological variables** (entire data set): **winter (DJF)**
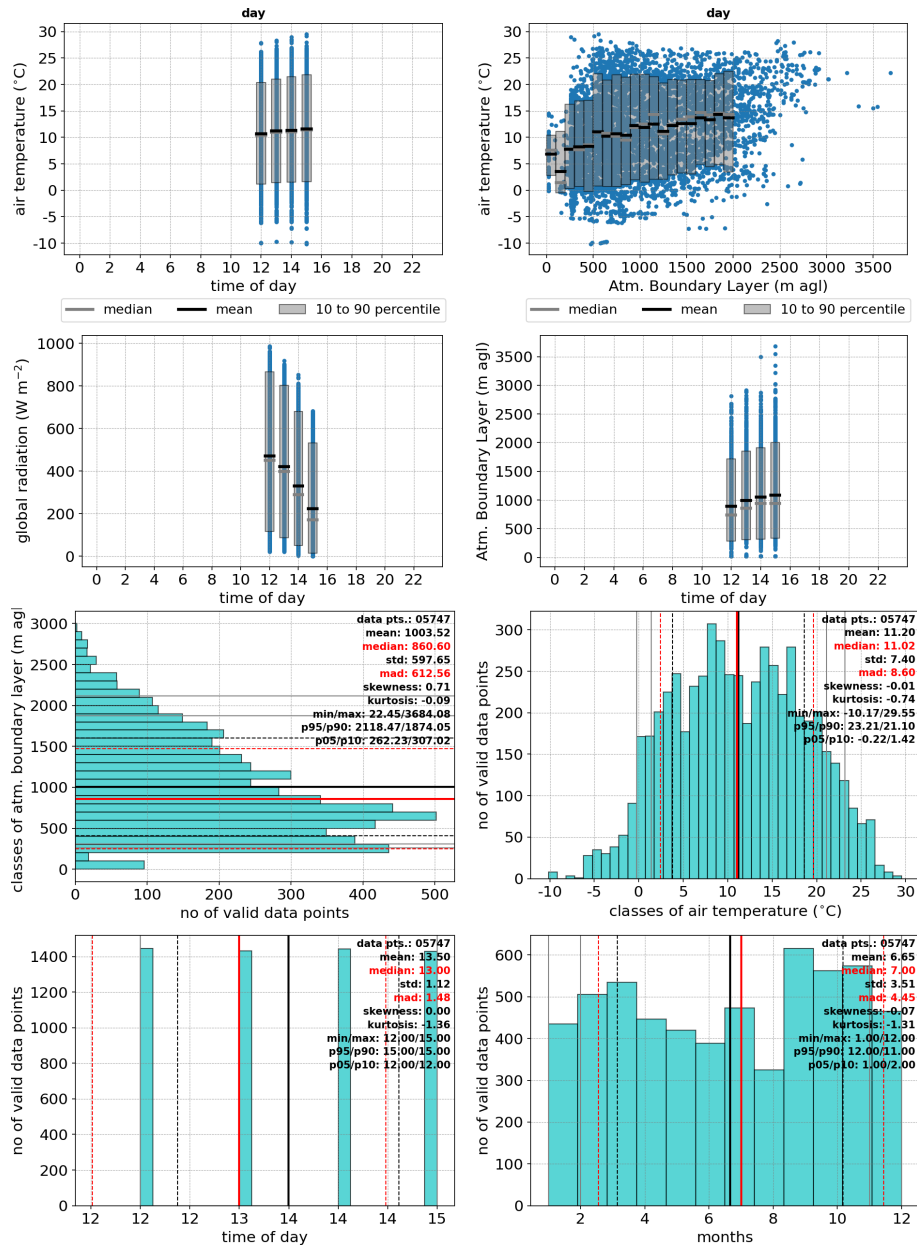
Figure S9: Overview plots for **additional meteorological variables** (entire data set): **day**
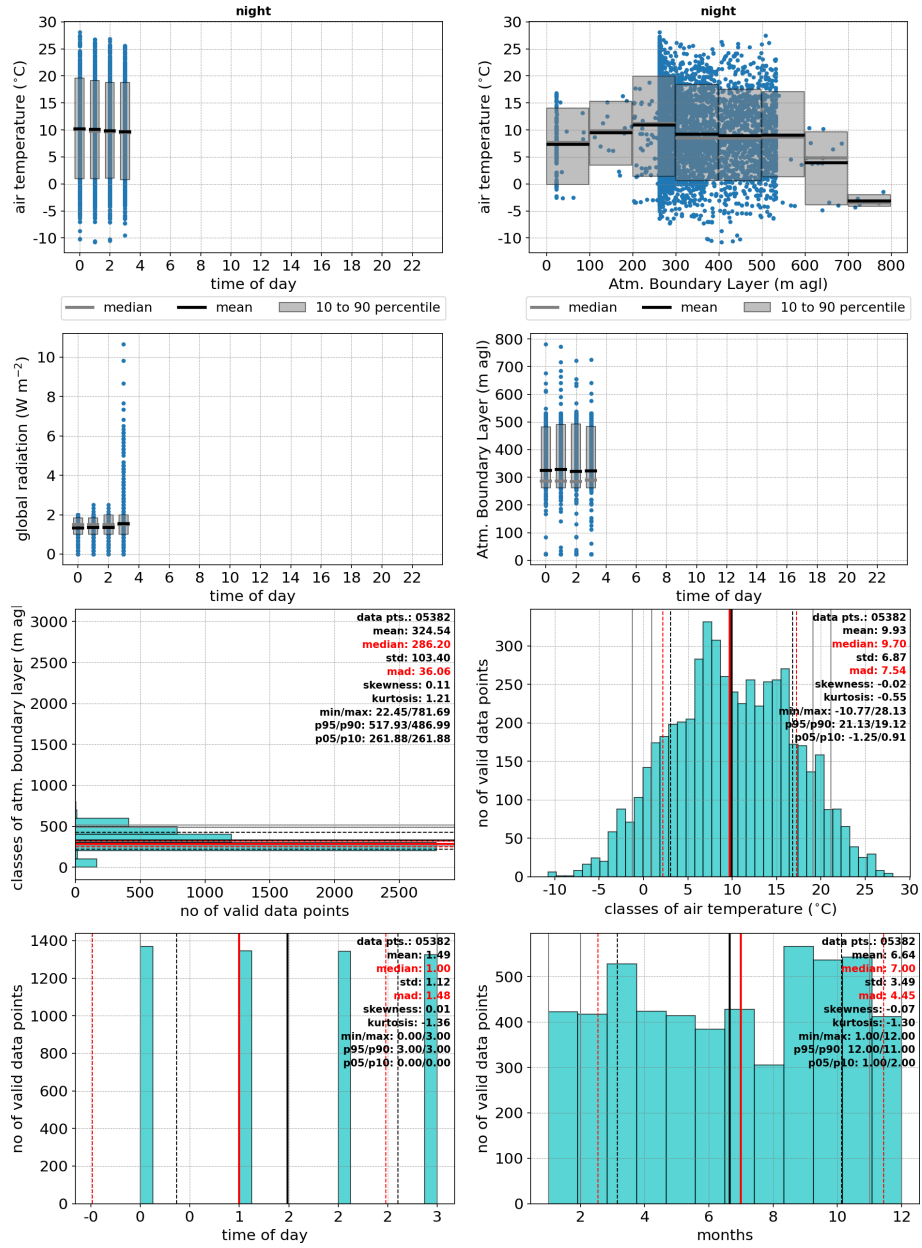
Figure S10: Overview plots for **additional meteorological variables** (entire data set): **night**
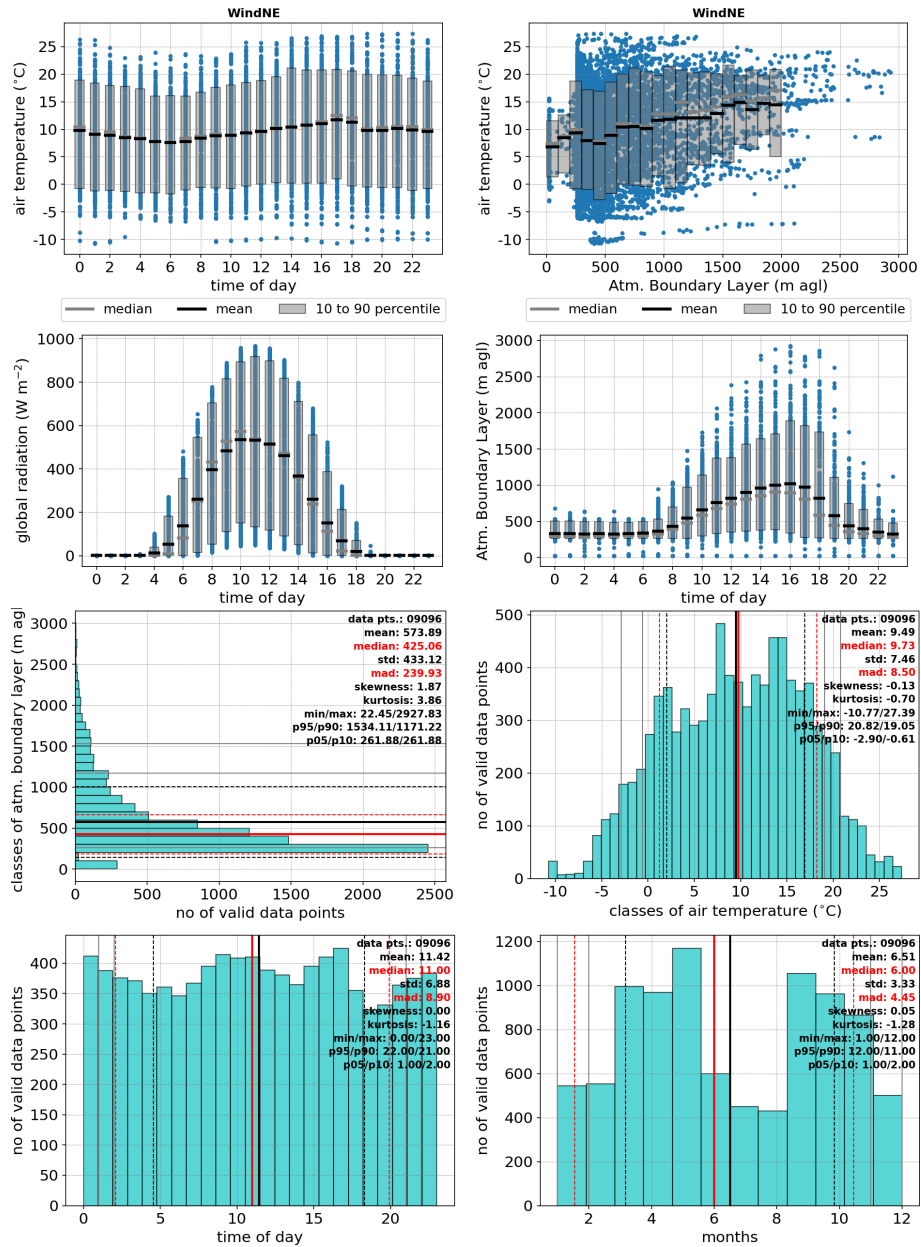
Figure S11: Overview plots for **additional meteorological variables** (entire data set): **wind from the Northeast (WindNE)**