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Zakład Klimatologii i Ochrony Atmosfery  
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Uniwersytet Wrocławski  
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Położenie obserwatorium (observatory location)

Współrzędne geograficzne (coordinates): 15°30'44"E 50°27'47"N

Wysokość nad poziomem morza (altitude): 1364 m

Czas podawany w biuletynie jest czasem UTC.

UTC time is used in the bulletin.

| Parametr Parameter | Opis                                       | Description                           |
|--------------------|--|---------------------------------------|
| D                  | Dzień                                      | Day                                   |
| T                  | Temperatura powietrza                      | Air temperature                       |
| Tmax               | Temperatura maksymalna                     | Maximum temperature                   |
| Tmin               | Temperatura minimalna                      | Minimum temperature                   |
| Tmin5              | Temperatura minimalna przy gruncie         | Minimum temperature near the ground   |
| U                  | Wilgotność względna                        | Relative humidity                     |
| e                  | Ciśnienie pary wodnej                      | Vapour pressure                       |
| P                  | Ciśnienie atmosferyczne na poziomie stacji | Atmospheric pressure at station level |
| V                  | Prędkość wiatru                            | Wind speed                            |
| α                  | Kierunek wiatru                            | Wind direction                        |
| R                  | Dobowa suma opadu                          | Precipitation                         |
| HS                 | Wysokość pokrywy śnieżnej                  | Snow depth                            |
| SD                 | Usłonecznienie                             | Sunshine duration                     |
| NA                 | Brak danych                                | No data                               |
| m                  | Średnia dobowa                             | Daily mean                            |
| •                  | Zjawisko nie wystąpiło                     | Lack of phenomenon                    |

**Tabela 1. Temperatura powietrza (T), wilgotność względna (U) i ciśnienie atmosferyczne (P)**  
**Table 1. Air temperature (T), relative humidity (U) and atmospheric pressure (P)**

| D  | T [°C] |      |      |     |      |      |       | U [%] |     |     |     | P [hPa] |       |       |       |
|----|--------|------|------|-----|------|------|-------|-------|-----|-----|-----|---------|-------|-------|-------|
|    | 07     | 12   | 18   | Tm  | Tmax | Tmin | Tmin5 | 06    | 12  | 18  | Um  | 06      | 12    | 18    | Pm    |
| 1  | 13.2   | 10.6 | 6.5  | 9.2 | 15.7 | 3.9  | 5.9   | 74    | 77  | 37  | 63  | 864.5   | 865.0 | 865.7 | 865.1 |
| 2  | 7.5    | 7.9  | 4.7  | 6.2 | 12.6 | 3.6  | -5.4  | 50    | 82  | 67  | 66  | 867.3   | 868.8 | 869.5 | 868.5 |
| 3  | 6.5    | 10.6 | 5.8  | 7.2 | 11.2 | 4.4  | -2.6  | 76    | 61  | 84  | 74  | 869.9   | 869.8 | 868.9 | 869.5 |
| 4  | 5.7    | 8.2  | 7.1  | 7.0 | 8.9  | 5.4  | 2.0   | 84    | 85  | 83  | 84  | 866.6   | 866.7 | 866.4 | 866.6 |
| 5  | 6.2    | 11.3 | 7.6  | 8.2 | 11.8 | 5.5  | 3.4   | 88    | 76  | 95  | 86  | 866.0   | 868.1 | 869.2 | 867.8 |
| 6  | 8.5    | 11.2 | 6.8  | 8.3 | 11.6 | 6.6  | 3.2   | 70    | 65  | 75  | 70  | 867.3   | 864.9 | 860.2 | 864.1 |
| 7  | 5.7    | 8.6  | 6.1  | 6.6 | 9.2  | 5.2  | 2.2   | 68    | 76  | 94  | 79  | 853.0   | 851.1 | 852.8 | 852.3 |
| 8  | 6.2    | 5.7  | 4.5  | 5.2 | 7.4  | 4.4  | 3.8   | 94    | 95  | 100 | 96  | 852.3   | 855.0 | 860.5 | 855.9 |
| 9  | 3.9    | 8.1  | 6.3  | 6.2 | 9.8  | 2.7  | 1.5   | 100   | 88  | 87  | 92  | 867.6   | 872.4 | 874.8 | 871.6 |
| 10 | 6.9    | 12.4 | 7.3  | 8.5 | 12.4 | 4.9  | -4.9  | 86    | 66  | 75  | 76  | 876.0   | 876.1 | 874.9 | 875.7 |
| 11 | 8.6    | 12.3 | 7.4  | 8.9 | 12.9 | 6.0  | -4.2  | 52    | 66  | 79  | 66  | 873.0   | 872.1 | 872.3 | 872.5 |
| 12 | 8.3    | 8.7  | 3.8  | 6.2 | 9.2  | 3.6  | -3.2  | 99    | 91  | 99  | 96  | 872.8   | 873.9 | 873.7 | 873.5 |
| 13 | 1.4    | 3.2  | 0.9  | 1.6 | 4.0  | 0.8  | -0.2  | 97    | 90  | 97  | 95  | 872.1   | 873.5 | 872.9 | 872.8 |
| 14 | 0.1    | 4.5  | 2.2  | 2.3 | 6.1  | -0.2 | -1.9  | 97    | 73  | 100 | 90  | 872.4   | 872.9 | 872.3 | 872.5 |
| 15 | 2.6    | 5.8  | 5.6  | 4.9 | 9.6  | 2.1  | 2.1   | 100   | 96  | 62  | 86  | 871.4   | 870.7 | 869.7 | 870.6 |
| 16 | 5.1    | 8.4  | 4.3  | 5.5 | 9.3  | 4.0  | -4.6  | 84    | 76  | 100 | 87  | 866.8   | 865.4 | 863.3 | 865.2 |
| 17 | 2.6    | 3.5  | 3.4  | 3.2 | 4.4  | 2.0  | 2.2   | 100   | 100 | 100 | 100 | 855.3   | 853.7 | 845.1 | 851.4 |
| 18 | 2.2    | 2.5  | -0.1 | 1.1 | 3.5  | -0.4 | 0.7   | 100   | 100 | 100 | 100 | 837.2   | 838.3 | 840.6 | 838.7 |
| 19 | -1.2   | 1.0  | 1.2  | 0.6 | 2.2  | -1.2 | -1.3  | 99    | 100 | 100 | 100 | 842.1   | 844.4 | 847.8 | 844.8 |
| 20 | -0.4   | 3.0  | 0.9  | 1.1 | 3.9  | -1.3 | -5.2  | 87    | 69  | 100 | 85  | 848.2   | 855.6 | 856.5 | 853.4 |
| 21 | 4.7    | 2.1  | -0.4 | 1.5 | 5.3  | -0.4 | 0.1   | 100   | 100 | 100 | 100 | 855.2   | 856.0 | 857.1 | 856.1 |
| 22 | -0.6   | 3.9  | 3.2  | 2.4 | 5.5  | -1.3 | -3.7  | 95    | 92  | 83  | 90  | 863.2   | 865.6 | 866.2 | 865.0 |
| 23 | 3.3    | 2.6  | 2.2  | 2.6 | 4.1  | 1.4  | -0.7  | 100   | 100 | 100 | 100 | 865.5   | 864.7 | 866.8 | 865.7 |
| 24 | 2.3    | 5.4  | 2.8  | 3.3 | 5.5  | 2.1  | 1.7   | 100   | 100 | 90  | 97  | 866.7   | 867.0 | 865.9 | 866.5 |
| 25 | 3.0    | 3.8  | 5.4  | 4.4 | 6.1  | 2.3  | -0.4  | 78    | 100 | 100 | 93  | 862.3   | 861.8 | 863.5 | 862.5 |
| 26 | 4.6    | 6.3  | 7.3  | 6.4 | 7.5  | 4.4  | 4.5   | 90    | 100 | 81  | 90  | 860.8   | 861.6 | 861.4 | 861.3 |
| 27 | 4.6    | 14.2 | 6.1  | 7.8 | 14.4 | 4.4  | 0.3   | 99    | 50  | 100 | 83  | 858.4   | 859.9 | 859.1 | 859.1 |
| 28 | 5.1    | 7.9  | 4.9  | 5.7 | 8.5  | 3.5  | -0.4  | 100   | 86  | 100 | 95  | 859.5   | 859.3 | 859.1 | 859.3 |
| 29 | 2.4    | 1.8  | 1.5  | 1.8 | 4.9  | 1.0  | 2.0   | 100   | 100 | 100 | 100 | 856.9   | 858.8 | 860.9 | 858.9 |
| 30 | 1.1    | 4.2  | 2.1  | 2.4 | 5.9  | 0.9  | -3.6  | 100   | 84  | 91  | 92  | 860.9   | 861.8 | 863.2 | 862.0 |
| 31 | 0.3    | 0.2  | -0.1 | 0.1 | 2.2  | -0.3 | -5.7  | 100   | 100 | 100 | 100 | 863.0   | 863.9 | 865.4 | 864.1 |

Tabela 2. Prędkość (V) i kierunek ( $\alpha$ ) wiatru, dobowy suma opadu (R) i wysokość pokrywy śnieżnej (HS)Table 2. Wind speed (V) and direction ( $\alpha$ ), daily sum of precipitation (R) and snow cover depth (HS)

| D  | V [m/s] |    |    |      | $\alpha$ [1-32] |    |    | R[mm] | HS[cm] |
|----|---------|----|----|------|-----------------|----|----|-------|--------|
|    | 06      | 12 | 18 | Vm   | 06              | 12 | 18 |       |        |
| 1  | 4       | 5  | 6  | 5.0  | 10              | 10 | 10 | •     | NA     |
| 2  | 5       | 7  | 9  | 7.0  | 10              | 10 | 12 | •     | NA     |
| 3  | 13      | 3  | 11 | 9.0  | 12              | 12 | 12 | •     | NA     |
| 4  | 23      | 21 | 26 | 23.3 | 12              | 12 | 12 | 0.0   | NA     |
| 5  | 26      | 16 | 14 | 18.7 | 14              | 14 | 14 | •     | NA     |
| 6  | 19      | 23 | 26 | 22.7 | 14              | 14 | 14 | •     | NA     |
| 7  | 30      | 28 | 27 | 28.3 | 14              | 14 | 14 | 0.0   | NA     |
| 8  | 27      | 19 | 8  | 18.0 | 14              | 16 | 22 | 5.8   | NA     |
| 9  | 8       | 6  | 0  | 4.7  | 24              | 24 | 0  | 0.2   | NA     |
| 10 | 4       | 1  | 2  | 2.3  | 24              | 8  | 12 | •     | NA     |
| 11 | 7       | 9  | 6  | 7.3  | 16              | 16 | 22 | 0.1   | NA     |
| 12 | 7       | 5  | 9  | 7.0  | 8               | 4  | 8  | •     | NA     |
| 13 | 12      | 7  | 12 | 10.3 | 8               | 4  | 6  | •     | NA     |
| 14 | 7       | 5  | 9  | 7.0  | 32              | 32 | 32 | 0.1   | NA     |
| 15 | 7       | 2  | 7  | 5.3  | 30              | 18 | 26 | •     | NA     |
| 16 | 11      | 11 | 14 | 12.0 | 22              | 22 | 22 | 0.4   | NA     |
| 17 | 14      | 17 | 23 | 18.0 | 24              | 22 | 22 | 23.5  | NA     |
| 18 | 20      | 9  | 1  | 10.0 | 18              | 24 | 20 | 9.6   | NA     |
| 19 | 6       | 8  | 14 | 9.3  | 16              | 14 | 20 | •     | 2      |
| 20 | 6       | 4  | 8  | 6.0  | 20              | 10 | 10 | 16.4  | NA     |
| 21 | 11      | 11 | 14 | 12.0 | 10              | 14 | 14 | 6.3   | NA     |
| 22 | 4       | 12 | 14 | 10.0 | 24              | 14 | 14 | 0.1   | NA     |
| 23 | 17      | 23 | 16 | 18.7 | 14              | 16 | 16 | 4.2   | NA     |
| 24 | 20      | 21 | 18 | 19.7 | 22              | 16 | 16 | 0.0   | NA     |
| 25 | 18      | 20 | 17 | 18.3 | 16              | 20 | 16 | 2.3   | NA     |
| 26 | 20      | 15 | 13 | 16.0 | 16              | 22 | 14 | •     | NA     |
| 27 | 2       | 5  | 13 | 6.7  | 16              | 24 | 14 | 0.1   | NA     |
| 28 | 1       | 0  | 0  | 0.3  | 26              | 0  | 0  | 3.3   | NA     |
| 29 | 4       | 1  | 5  | 3.3  | 12              | 12 | 26 | 7.0   | NA     |
| 30 | 4       | 2  | 0  | 2.0  | 26              | 28 | 0  | 0.2   | NA     |
| 31 | 12      | 13 | 16 | 13.7 | 28              | 24 | 24 | 0.4   | NA     |

**Tabela 3. Liczba dni charakterystycznych w bieżącym miesiącu oraz średnia liczba dni charakterystycznych dla tego miesiąca w wieloleciu 1960 - 2000**

**Table 3. Number of days with threshold value in current month and monthly average number of days with threshold value in the 1960- 2000 period**

| Nazwa / Name                                      | 1960-2000 | 1961-X |
|---|-----------|--------|
| Przymrozkowe ( $T_{min} < 0^{\circ}\text{C}$ )    | 13        | 7      |
| Mroźne ( $T_{max} < 0^{\circ}\text{C}$ )          | 3         | 0      |
| Bardzo mroźne ( $T_{min} < -10^{\circ}\text{C}$ ) | 0         | 0      |
| Ciepłe ( $T_{max} > 20^{\circ}\text{C}$ )         | 0         | 0      |
| Gorące ( $T_{max} > 25^{\circ}\text{C}$ )         | 0         | 0      |
| $R > 1 \text{ mm}$                                | 12        | 9      |
| $R > 10 \text{ mm}$                               | 3         | 2      |
| Liczba dni z pokrywą śnieżną                      | 6         | 1      |

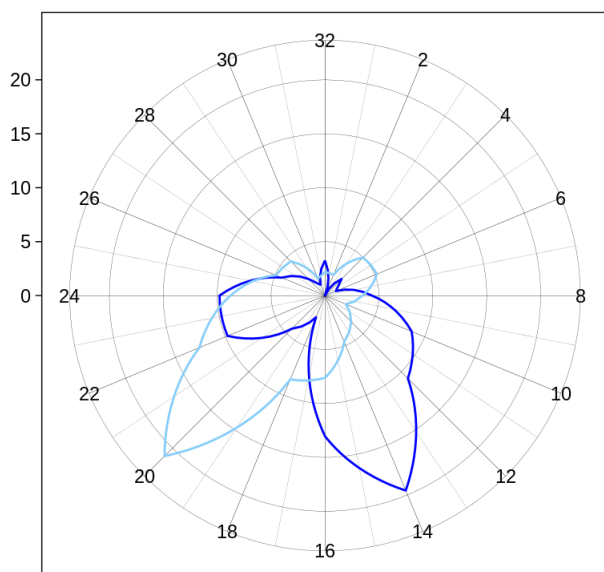
**Tabela 4. Wartości średnie i ekstrema miesięczne na tle charakterystyk miesięcznych dla wielolecia 1960 - 2000**

**Table 4. Average and extreme monthly values vs. average monthly characteristics for the 1960- 2000 period**

|                          | Opis                      | Description           | 1960-2000          | 1961-X             |
|--------------------------|---------------------------|-----------------------|--------------------|--------------------|
| T [ $^{\circ}\text{C}$ ] | Średnia miesięczna        | Monthly average       | 3.5                | 4.7                |
|                          | Maksymalna średnia dobowa | Maximum daily average | 6.5                | 7.9                |
|                          | Minimalna średnia dobowa  | Minimum daily average | 1.1                | 2.6                |
|                          | Średnie maksimum          | Average maximum       | 15.3 (1995-10-10)  | 9.2 (1961-10-01)   |
|                          | Absolutne maksimum        | Absolute maximum      | 21.6 (1977-10-07)  | 15.7 (1961-10-01)  |
|                          | Średnie minimum           | Average minimum       | -8.5 (1995-10-10)  | 0.1 (1961-10-01)   |
|                          | Absolutne minimum         | Absolute minimum      | -11.3 (1988-10-31) | -1.3 (1961-10-20)  |
| P [hPa]                  | Średnia miesięczna        | Monthly average       | 862.1              | 863.0              |
|                          | Maksimum                  | Maximum               | 878.3 (1965-10-22) | 875.7 (1961-10-10) |
|                          | Minimum                   | Minimum               | 828.8 (1974-10-22) | 838.7 (1961-10-18) |
| V [m/s]                  | Średnia miesięczna        | Monthly average       | 10.0               | 11.4               |
|                          | Średnie maksimum          | Average maximum       | 12.8               | 14.5               |
|                          | Absolutne maksimum        | Absolute maximum      | 34.0 (1963-10-31)  | 30.0 (1961-10-07)  |
| R [mm]                   | Suma miesięczna           | Monthly sum           | 107.4              | 80.0               |
|                          | Maksymalna suma dobowa    | Maximum daily sum     | 80.2 (1964-10-08)  | 23.5 (1961-10-17)  |

(a) Wind direction frequency [%]

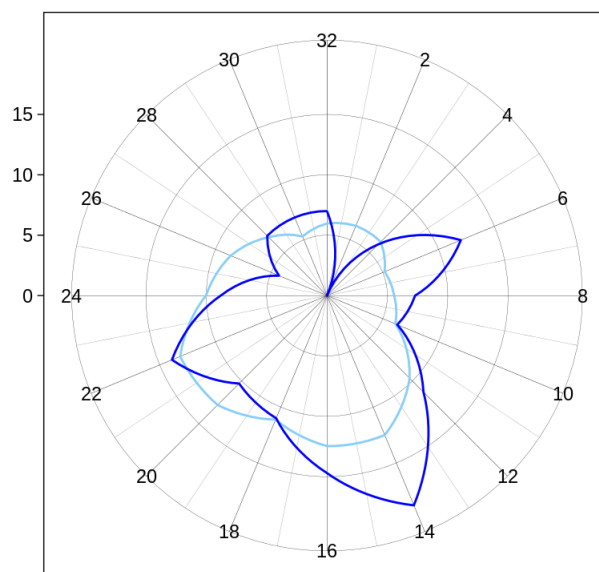
Calm: current NA % Calm 1960-200 2.2 %



— October 1960-2000 — October 1961

(b) Wind velocity [m/s]

Calm current NA % Calm 1960-2000 2.2 %

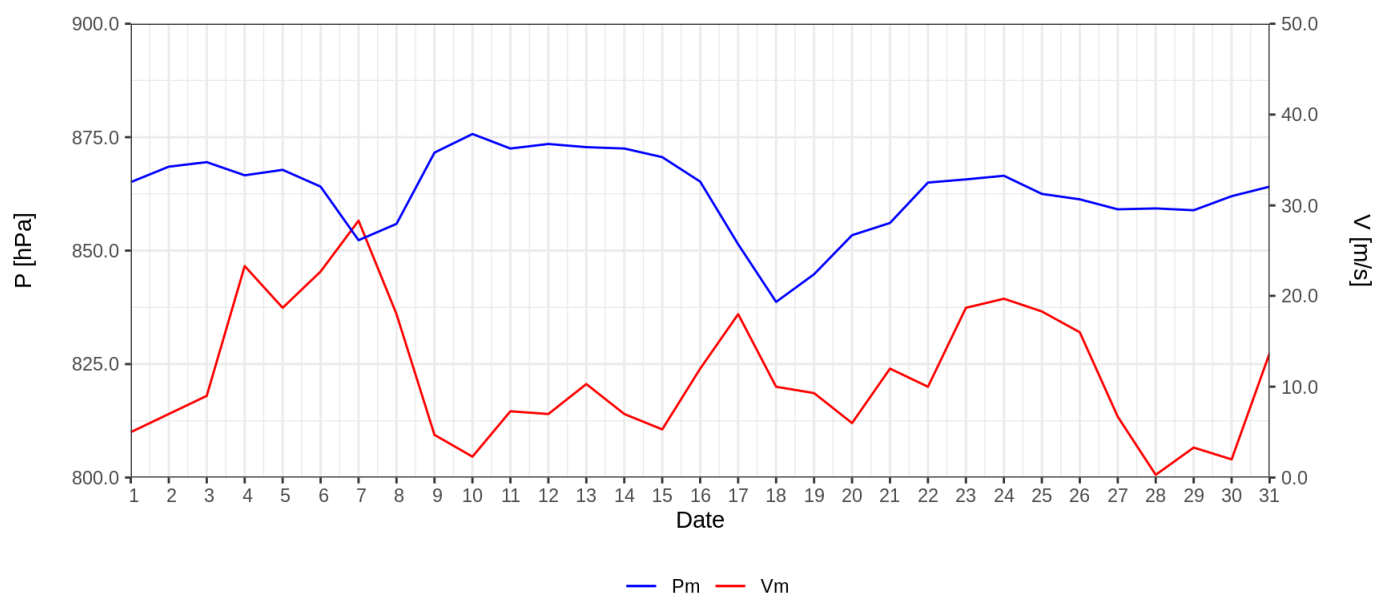


— October 1960-2000 — October 1961

Ryc. 1. Częstość (a) i prędkość wiatru (b) wg kierunków

Fig. 1. Wind direction frequency (a) and wind velocity for a given direction (b)

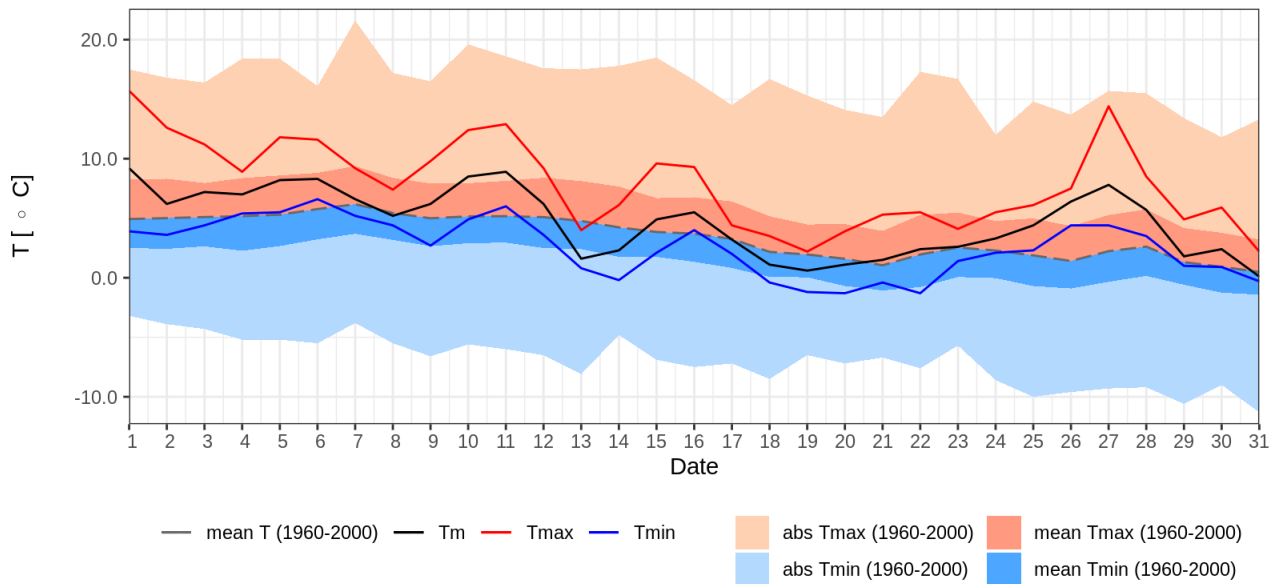
\*) W statystyce dotyczącej kierunku wiatru uwzględniono kierunki wiatru odpowiadające skali 16 stopniowej prezentowanej wartościami [2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32].



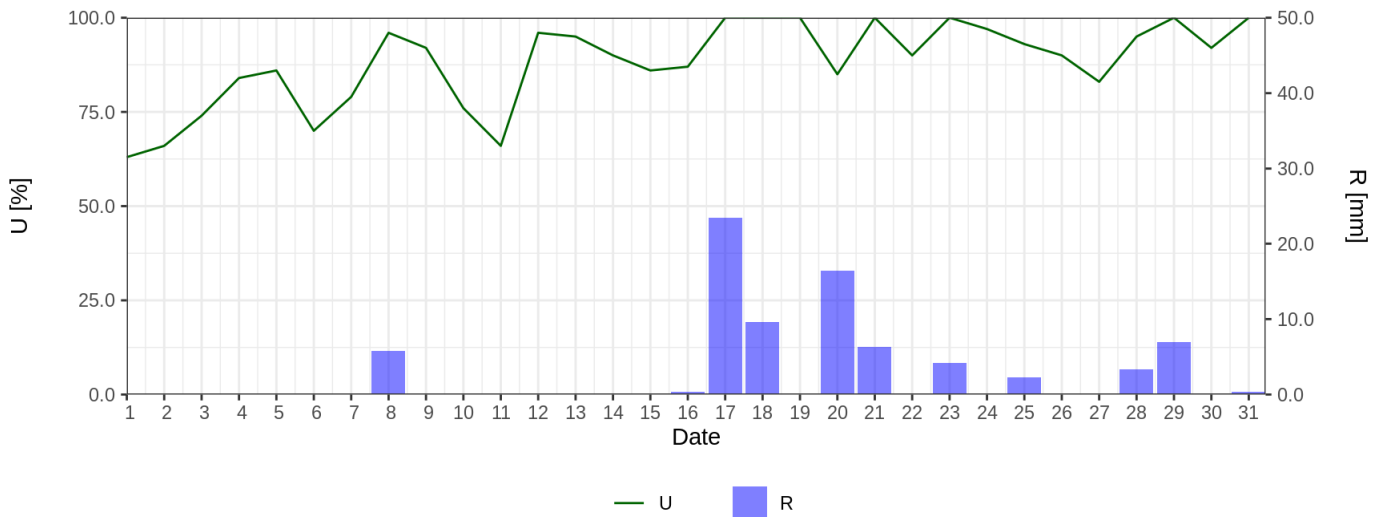
— Pm — Vm

Ryc. 2. Średnie dobowe ciśnienie atmosferyczne i prędkość wiatru

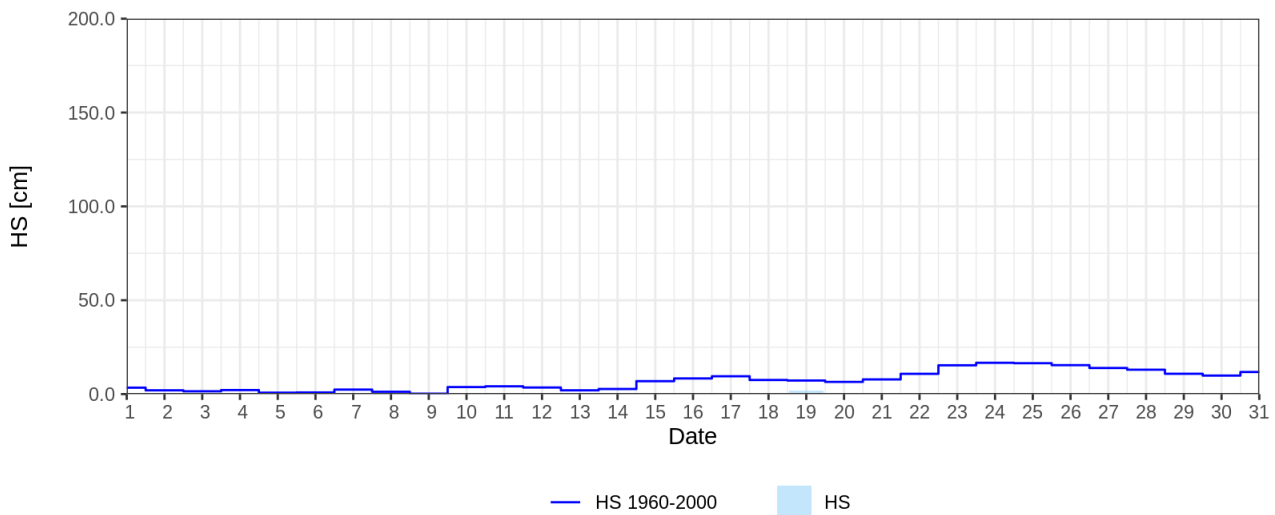
Fig. 2. Daily average air pressure and wind speed



Ryc. 3. Średnia dobowa, minimalna i maksymalna temperatura powietrza dla miesiąca na tle danych z wielolecia 1960 - 2000  
 Fig. 3. Daily mean, maximum and minimum air temperature for given month and 1960-2000 period



Ryc. 4. Średnia dobowa wilgotność względna powietrza i dobowe sumy opadu atmosferycznego  
 Fig. 4. Mean daily relative humidity and daily sum of precipitation



Ryc. 5. Wysokość pokrywy śnieżnej  
 Fig. 5. Snow cover depth