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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  | 0.4    | 0.5  | 0.3  | 0.4  | 1.5  | -2.9  | -5.9  | 70    | 76  | 95  | 80 | 852.4   | 854.9 | 856.3 | 854.5 |
| 2  | 0.1    | 0.3  | 1.6  | 0.9  | 2.1  | -0.6  | -2.4  | 93    | 99  | 98  | 97 | 856.4   | 855.5 | 854.9 | 855.6 |
| 3  | 2.7    | 5.5  | 4.5  | 4.3  | 6.6  | 0.5   | -3.5  | 77    | 58  | 67  | 67 | 854.6   | 856.8 | 858.0 | 856.5 |
| 4  | 2.5    | -0.2 | -0.7 | 0.2  | 5.0  | -2.2  | -4.7  | 73    | 100 | 88  | 87 | 860.1   | 852.5 | 859.8 | 857.5 |
| 5  | -0.4   | -1.0 | -2.5 | -1.6 | 0.9  | -2.7  | -3.3  | 96    | 99  | 98  | 98 | 859.9   | 861.7 | 862.9 | 861.5 |
| 6  | -2.0   | -1.8 | -1.6 | -1.8 | -1.1 | -3.1  | -3.8  | 99    | 95  | 98  | 97 | 862.8   | 860.9 | 858.6 | 860.8 |
| 7  | 1.4    | 2.5  | -3.5 | -0.8 | 3.2  | -3.7  | -5.6  | 41    | 53  | 95  | 63 | 857.4   | 855.7 | 854.0 | 855.7 |
| 8  | -1.9   | -1.6 | -1.1 | -1.4 | -1.1 | -3.5  | -4.3  | 100   | 99  | 96  | 98 | 856.6   | 856.1 | 857.5 | 856.7 |
| 9  | -1.9   | -2.1 | -3.0 | -2.5 | -1.0 | -3.6  | -4.6  | 98    | 96  | 98  | 97 | 855.6   | 857.9 | 859.6 | 857.7 |
| 10 | -4.3   | -3.8 | -4.4 | -4.2 | -2.7 | -5.2  | -7.7  | 99    | 95  | 93  | 96 | 863.9   | 865.1 | 866.5 | 865.2 |
| 11 | -4.9   | -5.4 | -5.3 | -5.2 | -4.0 | -6.2  | -9.7  | 90    | 98  | 100 | 96 | 864.0   | 863.7 | 868.3 | 865.3 |
| 12 | -4.7   | 1.9  | -1.5 | -1.5 | 2.4  | -5.9  | -10.5 | 84    | 46  | 53  | 61 | 869.0   | 868.8 | 867.2 | 868.3 |
| 13 | -0.3   | 2.9  | 0.2  | 0.8  | 3.0  | -6.8  | -11.8 | 44    | 56  | 74  | 58 | 869.6   | 871.4 | 872.0 | 871.0 |
| 14 | 1.4    | 5.1  | 4.4  | 3.8  | 5.2  | -1.9  | -6.3  | 96    | 95  | 95  | 95 | 874.8   | 875.2 | 875.7 | 875.2 |
| 15 | 5.1    | 6.2  | 4.1  | 4.9  | 7.1  | 3.2   | -3.3  | 85    | 19  | 20  | 41 | 874.0   | 873.7 | 872.6 | 873.4 |
| 16 | 2.2    | 6.4  | 4.8  | 4.6  | 6.7  | 1.5   | -8.8  | 21    | 15  | 14  | 17 | 871.4   | 872.4 | 872.7 | 872.2 |
| 17 | 4.6    | 3.7  | 1.7  | 2.9  | 5.5  | 0.4   | -13.3 | 11    | 29  | 57  | 32 | 872.9   | 872.6 | 871.9 | 872.5 |
| 18 | -1.7   | -4.3 | -3.6 | -3.3 | 1.9  | -4.7  | -11.5 | 98    | 99  | 98  | 98 | 870.9   | 871.2 | 872.5 | 871.5 |
| 19 | -3.3   | -3.1 | -6.3 | -4.8 | -3.0 | -6.3  | -5.7  | 98    | 97  | 100 | 98 | 874.0   | 875.9 | 877.1 | 875.7 |
| 20 | -6.6   | -3.3 | -5.1 | -5.0 | -3.1 | -9.8  | -13.9 | 64    | 48  | 24  | 45 | 877.3   | 877.8 | 877.2 | 877.4 |
| 21 | -5.1   | -2.2 | -3.4 | -3.5 | -1.9 | -6.4  | -12.4 | 33    | 23  | 6   | 21 | 875.2   | 875.1 | 875.1 | 875.1 |
| 22 | -1.5   | 1.4  | 1.5  | 0.7  | 2.3  | -4.3  | -9.9  | 16    | 7   | 6   | 10 | 874.4   | 874.7 | 874.6 | 874.6 |
| 23 | -2.5   | -0.2 | -3.0 | -2.2 | 2.1  | -3.3  | -7.9  | 20    | 23  | 25  | 23 | 870.1   | 868.7 | 866.2 | 868.3 |
| 24 | -3.1   | -1.3 | -2.3 | -2.3 | -1.1 | -4.4  | -9.5  | 47    | 56  | 62  | 55 | 866.4   | 867.0 | 867.8 | 867.1 |
| 25 | -0.8   | 2.7  | 2.6  | 1.8  | 3.2  | -2.7  | -12.3 | 50    | 23  | 20  | 31 | 866.9   | 866.4 | 866.2 | 866.5 |
| 26 | -2.0   | -0.7 | -1.9 | -1.6 | 3.6  | -5.2  | -12.4 | 49    | 41  | 81  | 57 | 866.1   | 866.6 | 866.3 | 866.3 |
| 27 | -4.4   | -3.8 | -8.4 | -6.3 | -1.0 | -8.4  | -9.8  | 93    | 93  | 74  | 87 | 865.3   | 862.8 | 861.4 | 863.2 |
| 28 | -7.1   | -4.8 | -8.4 | -7.2 | -4.1 | -8.8  | -12.3 | 28    | 40  | 52  | 40 | 863.7   | 863.1 | 864.4 | 863.7 |
| 29 | -10.0  | -6.2 | -5.9 | -7.0 | -5.5 | -11.0 | -14.4 | 35    | 49  | 46  | 43 | 864.8   | 867.9 | 872.4 | 868.4 |
| 30 | -7.0   | -4.9 | -8.2 | -7.1 | -4.8 | -8.2  | -11.8 | 61    | 45  | 52  | 53 | 872.8   | 873.1 | 871.1 | 872.3 |
| 31 | -8.4   | -5.8 | -4.9 | -6.0 | -3.9 | -8.9  | -11.4 | 62    | 53  | 78  | 64 | 869.7   | 868.8 | 868.3 | 868.9 |

Tabela 2. Prędkość (V) i kierunek ( $\alpha$ ) wiatru, dobowa 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  | 9       | 6  | 15 | 10.0 | 18              | 18 | 20 | •     | 26     |
| 2  | 16      | 12 | 16 | 14.7 | 18              | 18 | 18 | 0.0   | 25     |
| 3  | 8       | 2  | 10 | 6.7  | 24              | 6  | 18 | 0.0   | 23     |
| 4  | 8       | 9  | 13 | 10.0 | 24              | 20 | 20 | 0.0   | 21     |
| 5  | 16      | 17 | 23 | 18.7 | 20              | 22 | 22 | •     | 25     |
| 6  | 18      | 24 | 25 | 22.3 | 20              | 20 | 20 | •     | 22     |
| 7  | 17      | 19 | 22 | 19.3 | 18              | 20 | 20 | 0.5   | 22     |
| 8  | 13      | 16 | 9  | 12.7 | 18              | 18 | 18 | 2.8   | 21     |
| 9  | 4       | 4  | 16 | 8.0  | 30              | 30 | 20 | 0.0   | 28     |
| 10 | 19      | 14 | 11 | 14.7 | 22              | 20 | 20 | •     | 28     |
| 11 | 12      | 13 | 11 | 12.0 | 20              | 20 | 20 | •     | 27     |
| 12 | 6       | 13 | 16 | 11.7 | 20              | 18 | 18 | •     | 27     |
| 13 | 2       | 6  | 9  | 5.7  | 28              | 28 | 28 | •     | 24     |
| 14 | 8       | 3  | 2  | 4.3  | 20              | 20 | 28 | 0.0   | 22     |
| 15 | 4       | 14 | 16 | 11.3 | 12              | 14 | 14 | •     | 21     |
| 16 | 13      | 9  | 4  | 8.7  | 18              | 14 | 14 | •     | 19     |
| 17 | 1       | 4  | 3  | 2.7  | 12              | 6  | 6  | •     | 18     |
| 18 | 4       | 7  | 5  | 5.3  | 4               | 2  | 2  | 2.2   | 18     |
| 19 | 3       | 5  | 10 | 6.0  | 2               | 2  | 6  | 3.7   | 19     |
| 20 | 11      | 13 | 13 | 12.3 | 12              | 14 | 14 | •     | 20     |
| 21 | 15      | 15 | 18 | 16.0 | 14              | 14 | 14 | •     | 18     |
| 22 | 16      | 16 | 15 | 15.7 | 14              | 14 | 14 | •     | 16     |
| 23 | 15      | 11 | 14 | 13.3 | 14              | 18 | 18 | •     | 16     |
| 24 | 10      | 11 | 6  | 9.0  | 20              | 20 | 20 | •     | 14     |
| 25 | 2       | 1  | 0  | 1.0  | 12              | 12 | 0  | •     | 14     |
| 26 | 6       | 11 | 24 | 13.7 | 14              | 14 | 14 | •     | 14     |
| 27 | 24      | 31 | 34 | 29.7 | 14              | 14 | 14 | •     | 14     |
| 28 | 28      | 27 | 28 | 27.7 | 14              | 14 | 14 | •     | 13     |
| 29 | 28      | 21 | 19 | 22.7 | 14              | 14 | 12 | •     | 13     |
| 30 | 19      | 20 | 23 | 20.7 | 12              | 12 | 14 | •     | 13     |
| 31 | 24      | 27 | 25 | 25.3 | 14              | 14 | 14 | •     | 13     |

**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 | 1972-XII |
|------------------------------|-----------|----------|
| Przymrozkowe (Tmin < 0°C)    | 30        | 27       |
| Mroźne (Tmax < 0°C)          | 21        | 14       |
| Bardzo mroźne (Tmin < -10°C) | 7         | 1        |
| Ciepłe (Tmax > 20°C)         | 0         | 0        |
| Gorące (Tmax > 25°C)         | 0         | 0        |
| R > 1 mm                     | 16        | 3        |
| R > 10 mm                    | 4         | 0        |
| Liczba dni z pokrywą śnieżną | 30        | 31       |

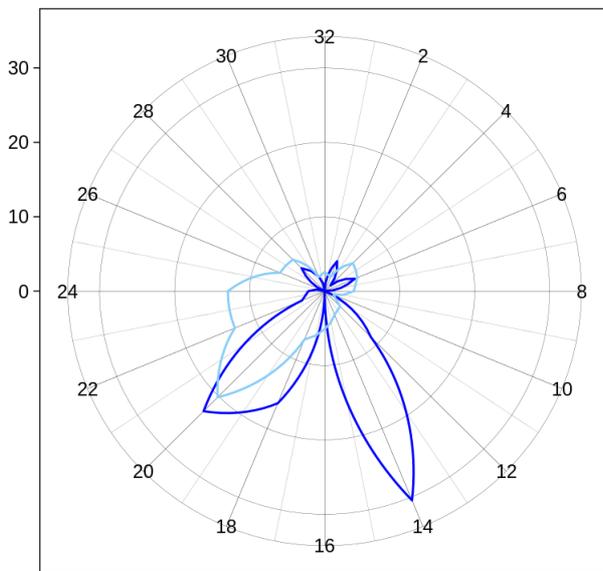
**Tabela 4. Wartości średnie i ekstrema miesięczne na tle charakterystyk miesięcznych dla wielolecia 1960 - 2000**

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

|         | Opis                      | Description           | 1960-2000          | 1972-XII           |
|---------|---------------------------|-----------------------|--------------------|--------------------|
| T [°C]  | Średnia miesięczna        | Monthly average       | -4.6               | -1.6               |
|         | Maksymalna średnia dobowa | Maximum daily average | -2.2               | 0.8                |
|         | Minimalna średnia dobowa  | Minimum daily average | -6.9               | -4.4               |
|         | Średnie maksimum          | Average maximum       | 8.6 (2000-12-01)   | 4.9 (1972-12-15)   |
|         | Absolutne maksimum        | Absolute maximum      | 13.4 (2000-12-01)  | 7.1 (1972-12-15)   |
|         | Średnie minimum           | Average minimum       | -19.8 (2000-12-01) | -7.2 (1972-12-15)  |
|         | Absolutne minimum         | Absolute minimum      | -22.8 (1962-12-23) | -11.0 (1972-12-29) |
| P [hPa] | Średnia miesięczna        | Monthly average       | 856.3              | 866.4              |
|         | Maksimum                  | Maximum               | 880.9 (1989-12-02) | 877.4 (1972-12-20) |
|         | Minimum                   | Minimum               | 819.2 (1976-12-02) | 854.5 (1972-12-01) |
| V [m/s] | Średnia miesięczna        | Monthly average       | 11.7               | 13.3               |
|         | Średnie maksimum          | Average maximum       | 14.8               | 16.5               |
|         | Absolutne maksimum        | Absolute maximum      | 42.0 (1988-12-04)  | 34.0 (1972-12-27)  |
| R [mm]  | Suma miesięczna           | Monthly sum           | 120.8              | 9.2                |
|         | Maksymalna suma dobowa    | Maximum daily sum     | 55.9 (1967-12-23)  | 3.7 (1972-12-19)   |

(a) Wind direction frequency [%]

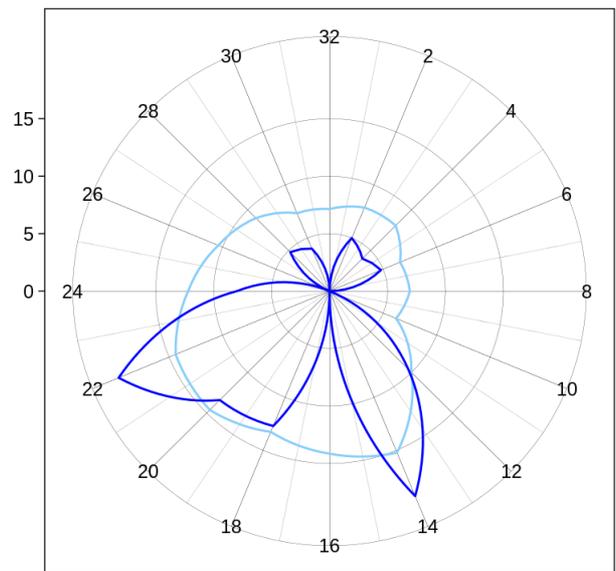
Calm: current NA % Calm 1960-200 1.1 %



— December 1960-2000 — December 1972

(b) Wind velocity [m/s]

Calm current NA % Calm 1960-2000 1.1 %

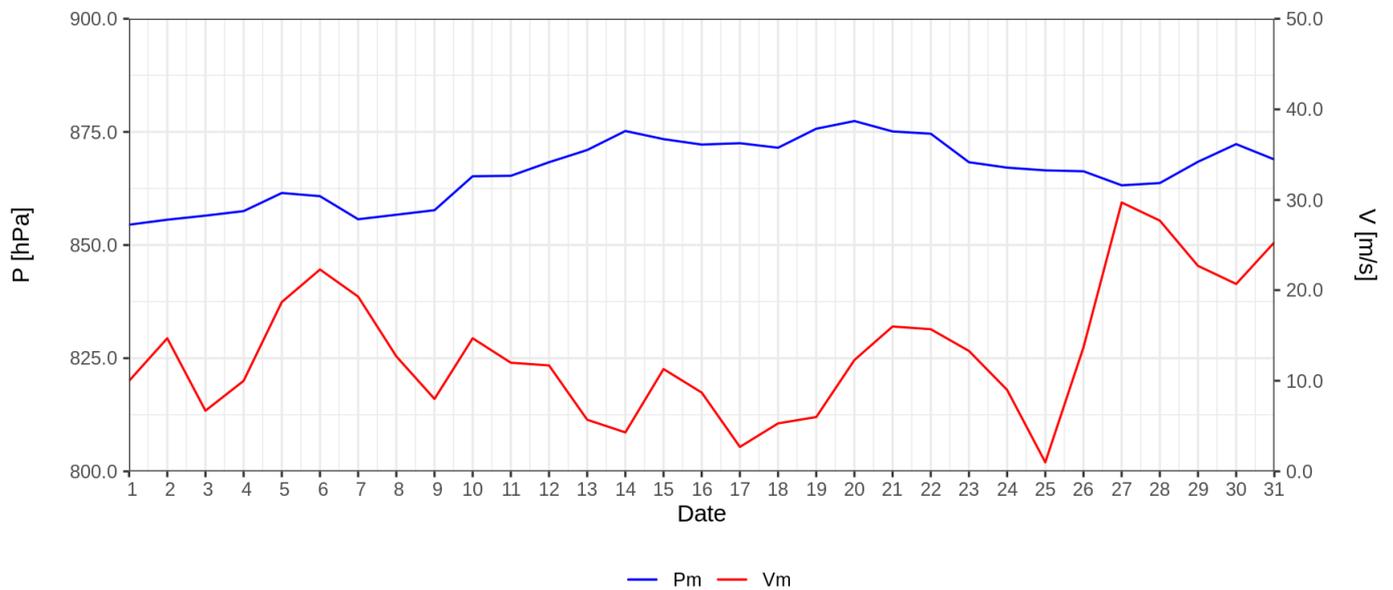


— December 1960-2000 — December 1972

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

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

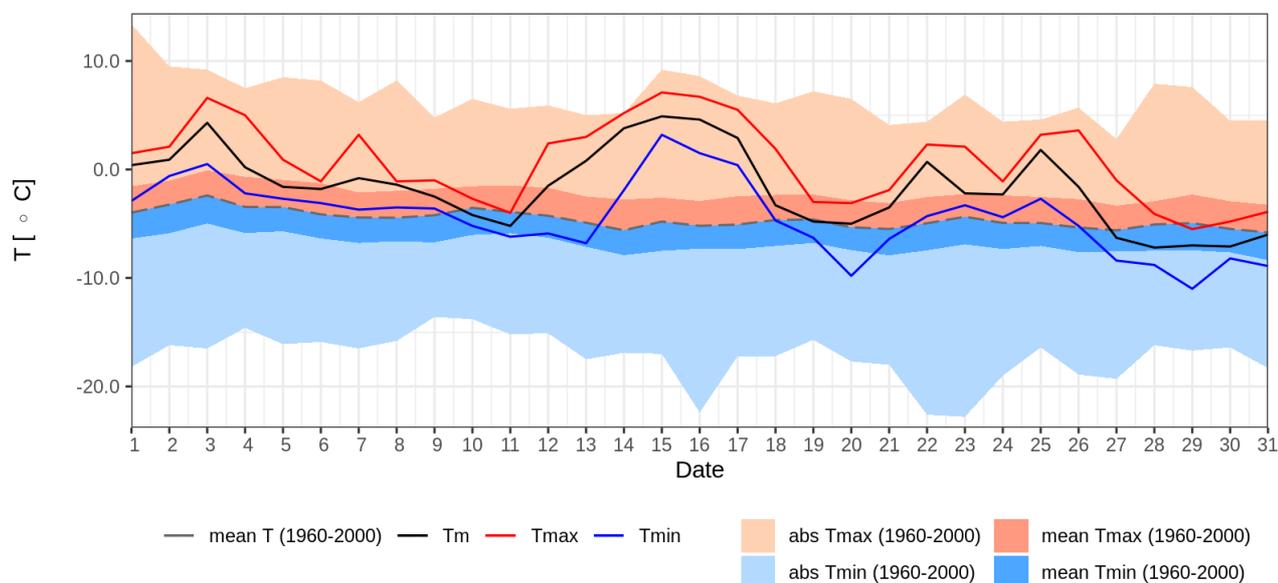
\*) W statystyce dotyczącej kierunku wiatru uwzględniono kierunki wiatru odpowiadające skali 16 stopniowej prezentowanej wartościami [2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,32].



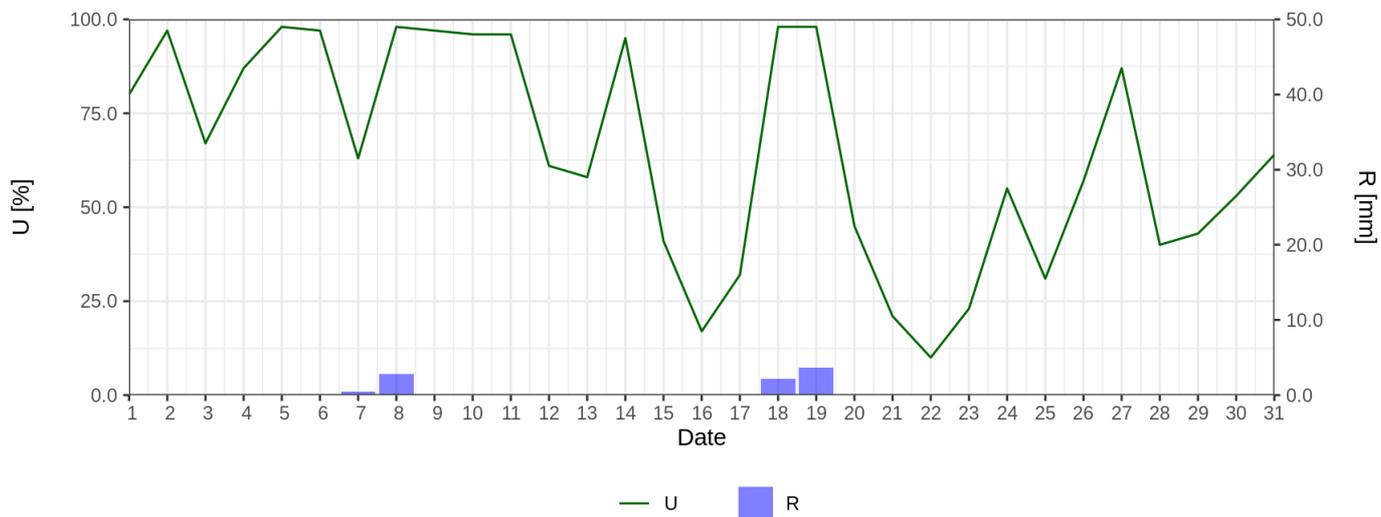
— Pm — Vm

Ryc. 2. Średnie dobowe ciśnienie atmosferyczne i prędkość wiatru

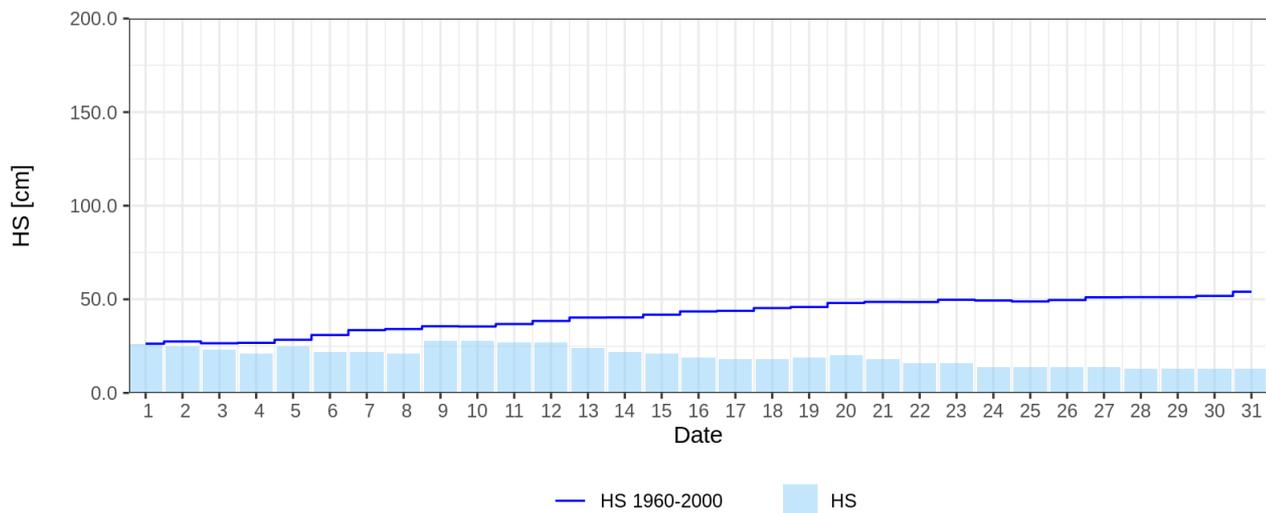
Fig. 2. Daily average air pressure and wind speed



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