

Task sets from annual meteorological bulletins from the Polish Polar Station Hornsund

WORKSHEET

Using a website <https://hornsund.igf.edu.pl/weather/> download the meteorological bulletin from the Polish Polar Station from the selected year (example: [report_2016_0.pdf](#), where the first number denotes year 2016 and 0 denotes the annual bulletin).

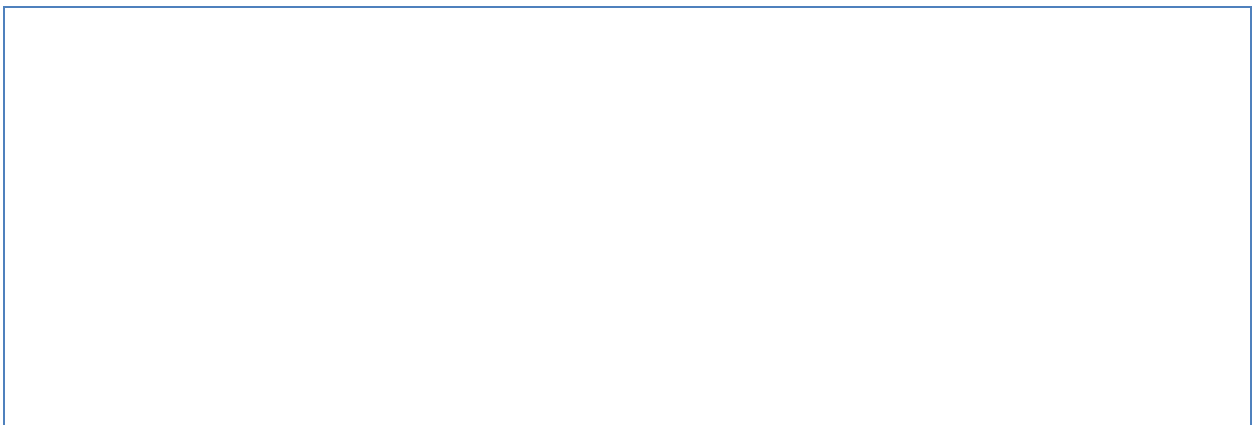
Task 1. Using the air temperature data from annual bulletin, especially chart with the *Annual course of daily mean air temperature* chart and the table, characterize four meteorological and four astronomical seasons (Spring, Summer, Autumn and Winter) at Hornsund Station.

Task 2. Using the precipitation data from annual bulletin, especially chart with the Annual and multi-annual course of monthly total precipitation and the table characterize amount of precipitation in four astronomical seasons (Spring, Summer, Autumn and Winter) at Hornsund station.

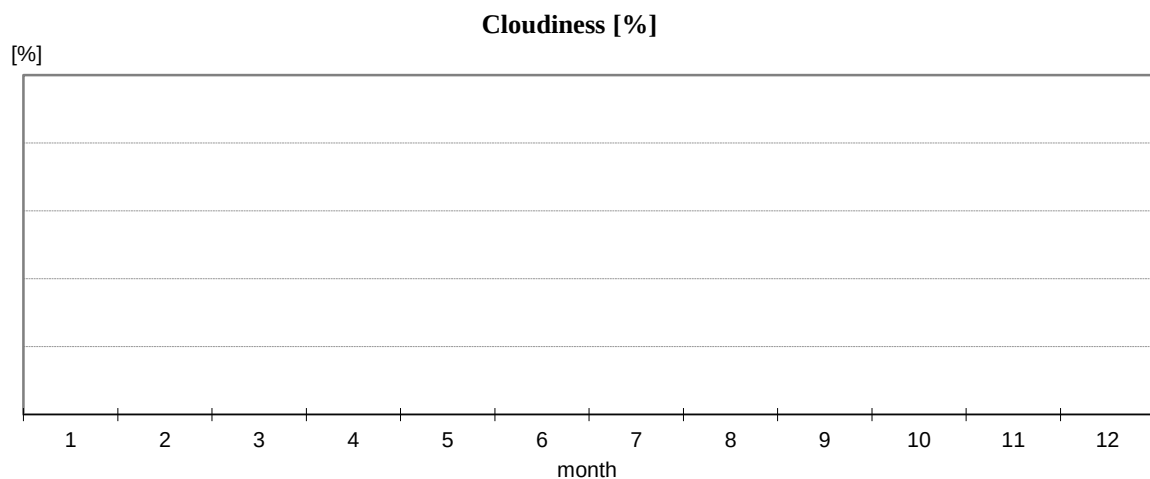
Task 3. Describe the variability of snow thickness using the chart with *Annual course of snow cover*.



Task 4. Describe the course of monthly air temperature in selected year in comparison to multi-annual monthly mean. Use the chart *Annual and multi-annual course of monthly mean air temperature*.



Task 5. Draw the course of the monthly mean cloudiness.



Task 6. Write down 3 months with the highest amount of foggy days in the year.

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Task 7. Using the chart *Annual course of daily mean air temperature* write down months during which daily average temperatures above 5°C were recorded.

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Task 8. Calculate the annual amplitude between the maximum and minimum air temperature.

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Task 9. Write down three months with the lowest sum of precipitation and three with the highest.

The lowest monthly sum of precipitation			
The highest monthly sum of precipitation			

Task 10. Write down three months with the lowest mean atmospheric pressure and three with the highest.

The lowest mean atmospheric pressure			
The highest mean atmospheric pressure			

Task 11. Calculate the difference between the lowest recorded air temperature in the year to the lowest multi-annual temperature.

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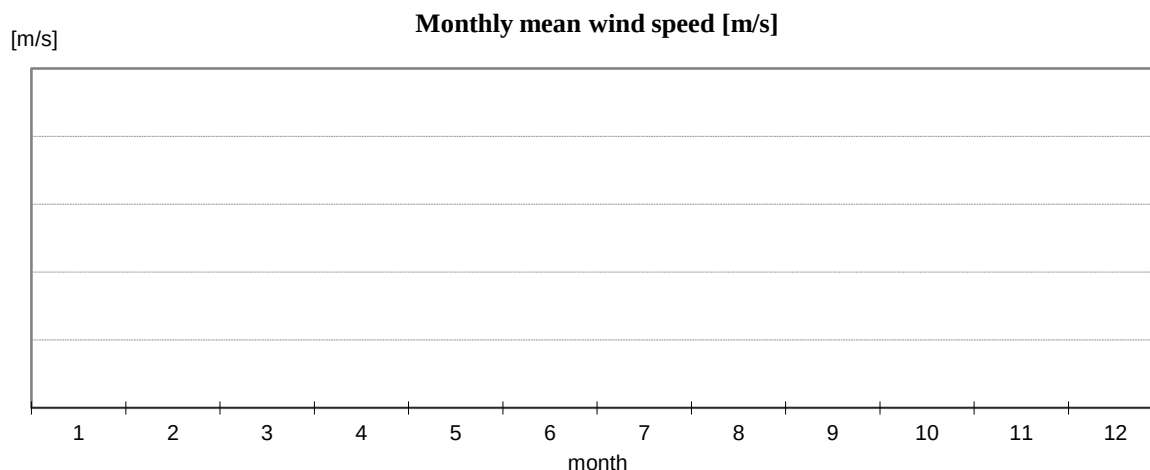
Task 12. Write down months with positive air temperature near the ground.

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Task 13. Write down months during which daily sum of precipitation was $\geq 10,0$ mm.

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Task 14. Draw the course of the monthly mean wind speed.



Task 15. Calculate the average air temperature in winter (December (previous year) – February), spring (March – May), summer (June – August) and autumn (September – November).

Winter	Spring	Summer	Autumn

Task 16. Using the table with air temperature data (columns with monthly mean and difference with multi-annual mean) calculate multi-annual mean air temperature for each month.

January	February	March	April	May	June	July	August	September	October	November	December

Task 17. Calculate sums of precipitation in winter (December (previous year) – February), spring (March – May), summer (June – August) and autumn (September – November).

Winter	Spring	Summer	Autumn

Task 18. Calculate the difference between the multi-annual monthly mean air temperature in recent month and air temperature today at Hornsund (use the website www.yr.no).

Task 19. Calculate the amplitude between the annual maximum and minimum of air temperature, atmospheric pressure, mean monthly cloudiness.

	Minimum	Maximum	Amplitude
Air temperature			
Atmospheric pressure			
Cloudiness			

Task 20. Compare duration of sunshine in each month and explain the differences through the year.