**Surface properties and carbon exchange at Hupsel – step 6  
Answer sheet**

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| Student (name) |  |

**At the end of this practical, upload this document to the Brightspace assignment**

# 1 Albedo

Include graphs that show how the albedo varies during the experiment, and within a day.

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| **Interpretation, explanation** | **Figures** |
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# 2a Variation albedo with solar zenith angle

Determine the cos(𝜃𝑧) for your data using the function cos\_zenith\_angle described above. What is the range of values you expect for cos(𝜃𝑧)?

Explain/interpret the relationship that you see.

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| **Interpretation, explanation** | **Figures** |
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# 2b Variation albedo with diffuse radiation

How does the temporal variation of albedo vary with the amount of diffuse radiation?

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| **Interpretation, explanation** | **Figures** |
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# 3 Roughness length

How did you compute the roughness length?

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Show the temporal variation of the roughness length. Does it really vary, or is the variation due to the way you computed the roughness length.

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| **Interpretation, explanation** | **Figures** |
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# 4a Roughness length: selection of neutral data with wind speed

How did you select the neutral data and what is the resulting estimate of the roughness length

Selection method and final value:

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Resulting figures and interpretation

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| **Interpretation, explanation** | **Figures** |
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# 4b Roughness length: selection of neutral data with z/L

How did you select the neutral data and what is the resulting estimate of the roughness length

Selection method and final value:

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Resulting figures and interpretation

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| **Interpretation, explanation** | **Figures** |
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# 5 Canopy resistance

What are typical values for the canopy resistance

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How does the canopy resistance vary on different time scales (during the experiment, during the day?).

Resulting figures and interpretation

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| **Interpretation, explanation** | **Figures** |
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# 6 CO2 uptake

What are typical values for the CO2 uptake?

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How does the CO2 uptake vary on different time scales (during the experiment, during the day?).

Resulting figures and interpretation

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| **Interpretation, explanation** | **Figures** |
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# 6 a Light response curve

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| **Interpretation, explanation** | **Figures** |
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# 7 a Light-use efficiency

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| **Interpretation, explanation** | **Figures** |
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# 6 b Water uptake response curve

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| **Interpretation, explanation** | **Figures** |
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# 7b Water-use efficiency

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| **Interpretation, explanation** | **Figures** |
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