you are variations
04/02

time space silence light

a series of events dedicated to the influences of Nan Hoover
1931 NYC -2008 Berlin

special edition

for Nan

Amsterdam, September 2014
Christina Della Giustina, 15/2

‘you are variations’
scoring scientific methods, sounding water’s cycles, becoming intimate with trees

How can we meet a tree?

Is it possible to get to know trees?
To hear them and become familiar with them?

How intensely, under what conditions, and through what forms of knowledge
do we experience and engage with “creation”, including ourselves?

How is it we ethically relate to the environment?

‘you are variations’ turns scientific long-term data of tree activities into tangible events, resulting in an intersection of the scientific and the aesthetic;
that is not just to question different knowledge regimes, but to explore the power that their mutual exchange and dialogue has in creating relationships with the environment;
that is creating (the condition for) an attitude of perceiving oneself together (with …).

Entangled with these epistemological probing
- what forms of intimacies with the organic do our known approaches distinguish, prevent, suggest, envision, and enable? -
are further questions that speak to a common querying across disciplines concerning our ways of being with ourselves and the world.
‘you are variation’ examines the environmental sensitivity of this ‘being’.

In probing the interface, the meeting points, and the fault-lines of a series of different knowledge forms, oscillating between the scientific and the aesthetic,
what is set in motion are relationships between these modes of exploration and understanding, and in doing so the possibilities for something hybrid, something else, something maybe new.

The method is composing and performative, testing - in the process - forms of meeting and relating to trees; we created molecular polyphonies, electro-acoustic polyrhythms, and oral as well as written poetry.
The results of these different experimental processes of engaging is a collage of sorts, a kind of material intimacies, in which the formal interweaving of diverse types of material (digital, acoustic, poetic)
performs a fertile heterogeneity, a conscious disorganization and re-organization.

The performances, installations, and books realized so far are affected and inspired by trees, building a cluster of experiments that test the possibility, the quality and the degree of intensity in experiencing trees.
Its resonations can be seen as attempts to convert distance into intensity, focusing on a qualitative transformation of distance into immediacy of relation to tree and self.
The working of these pieces though depends on their capacity to create contact zones,
and mediate between worlds; acting as ladders or bridges, similar to the water climbing trees.
It is in this mediating capacity that ‘you are variations, version 04/02’ is dedicated to my friend Nan Hoover.

‘you are variations’ takes place against the backdrop of concerns with the observable trends in climatic change, and the related known and unknown modifications, both globally as well as in our own microclimates.
It may not be an easily graspable subject: ‘you are variations’ draws attention to the complex water cycling and sophisticated energy balance of trees under different environmental conditions.
Its queries are relevant for contemporary regimes of scientific knowledge, especially those concerned with climate futures;
as well as for queries regarding art’s capacity to cultivate a set of environmental dispositions that cause pause for thought, and at the same time might move us,
for the sake of all human and non-human others we would like to live together and become intimate with.

LWF plot Lausanne *

list of parameters
with orchestration

- *atmosphere*	• relative air humidity [%]	dynamics H_2O	oud, bass clarinet
	• precipitation [mm]	articulation H_2O	percussion
- *tree*	• global solar radiation [W/m^2 /s]	tempo [bpm]	tutti
	• photosynthetic active radiation [micro mol/m^2 /s]	articulation [staccato - legatissimo]	celli, oud
	• evapotranspiration [mm])	lenght of breath H_2O	bass clarinet
- *soil*	• soil humidity [m^3/m^3 at 80 cm depth]	dynamics H_2O	marimba phone, glasharp

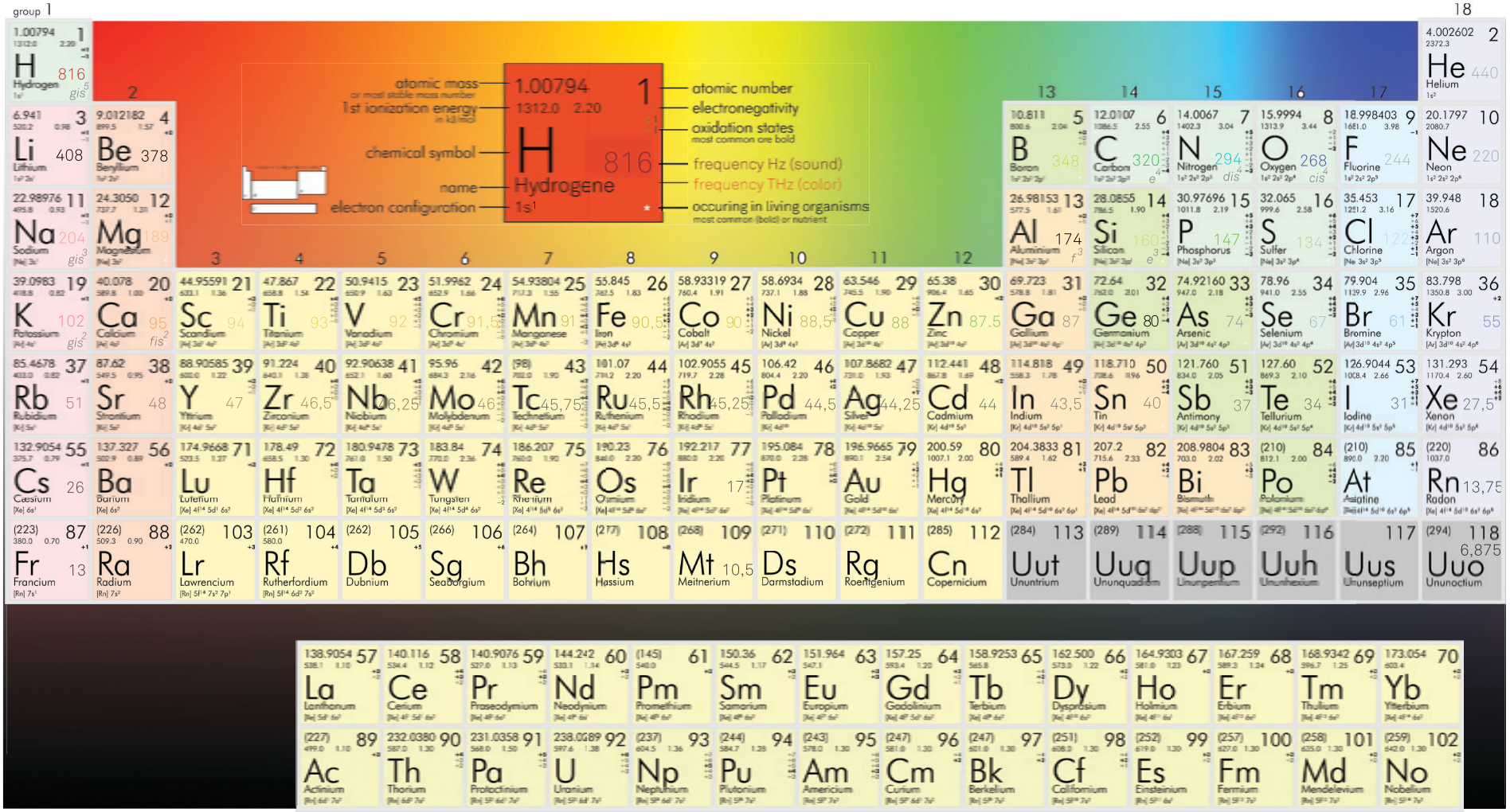
* • *date of installation:* 5 September 1994
• *altitude:* 800-814 m
• *mean slope:* 7%
• *size of the plot:* 2 ha

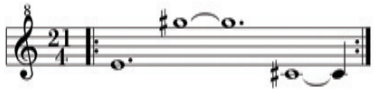
• *geological structure:* subsoil: Tertiary, Miocene, Burdigalian (upper molasse; sandstone)
surface: Quaternary, Würm glaciation (würm-glacial Moraine)
• *soil types:* Distric Cambisols
• *management system:* high forest

• *main tree species:* Fagus sylvatica
• *top-height diameter* (quadratic average diameter of the 100 thickest trees per ha): 59.9 cm
• *number of trees* BHD >= 12 cm (2011): 650
• *maximum tree age:* Abies alba 160-170 yr - Picea abies 160-170 yr - Fagus sylvatica 160-170 yr

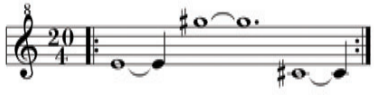
PERIODIC TABLE

atomic properties of the elements
related to sound- and light frequences

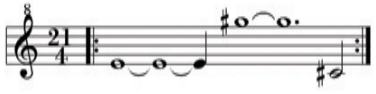




C6H10O5
cellulose



C5H10O5
xylose



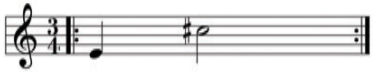
C9H10O2
lignin

sound motif ‘tree’ *[for Celli]*

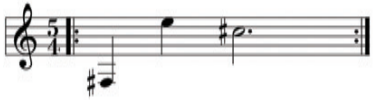
H2O

O2

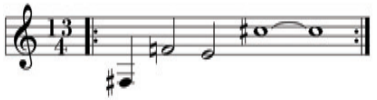
C



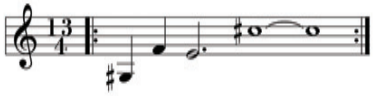
SiO2



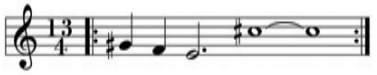
CaCO3



CaAl2Si08



KAlSi08



NaAlSi08

sound motifs ‘soil’ *[for Marimba]*

O2

H2O

N2

sound motifs ‘air’ *[for Oud]*

H2O

sound motif ‘water’ *[for Flute]*

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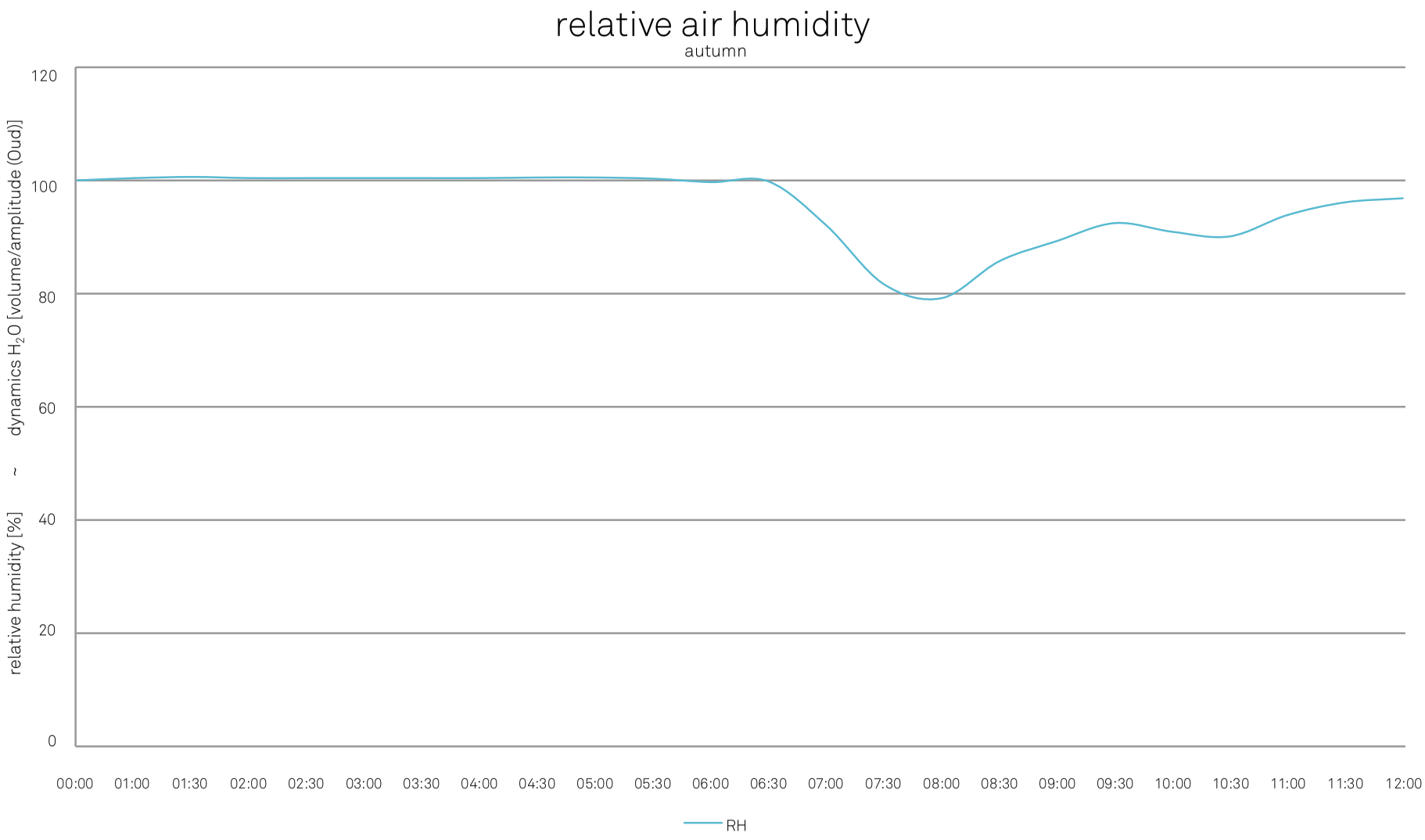
thanks to

Iona Blockey, cello
Dieter Buchwalder, glasharp
Aga Grzybowska Yano, marimba phone
Christian Moser, oud
Francis Petter, bass clarinet
Désirée Senn, cello
René Thie, electronics

Dr. Andreas Rigling
Head Research Unit Forest Dynamics and Member Board of Directors, WSL
Dr. Marcus Schaub and Dr. Peter Waldner
Programme heads LWF, WSL

J.Pasila

Amsterdam, September 2014
Christina Della Giustina, 15/2


relative air humidity
autumn
relative humidity [%] ~ dynamics H_2O [volume/amplitude (Oud)]
120
100
80
60
40
20
0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
05:30
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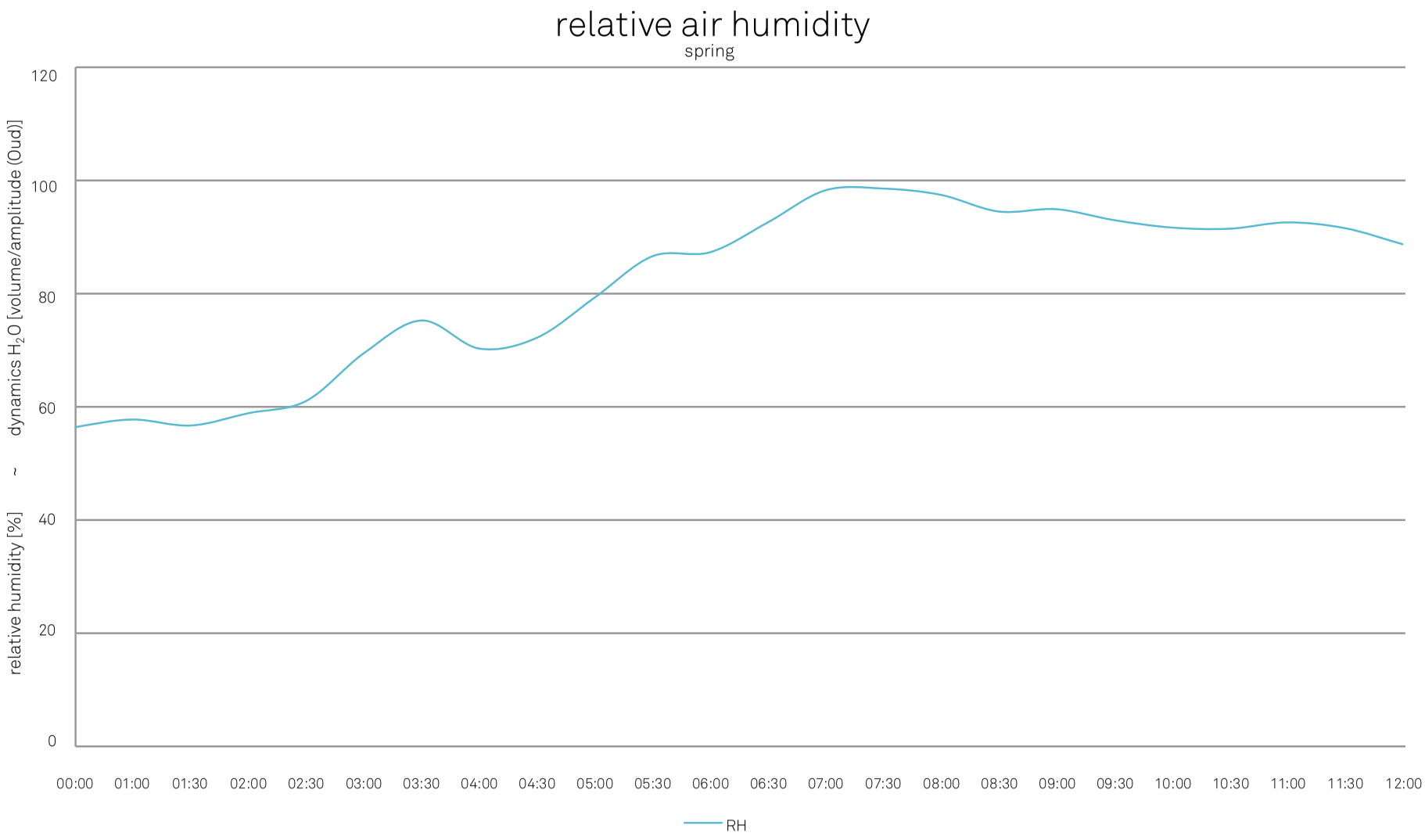
RH


relative air humidity
spring
relative humidity [%] ~ dynamics H_2O [volume/amplitude (Oud)]
120
100
80
60
40
20
0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
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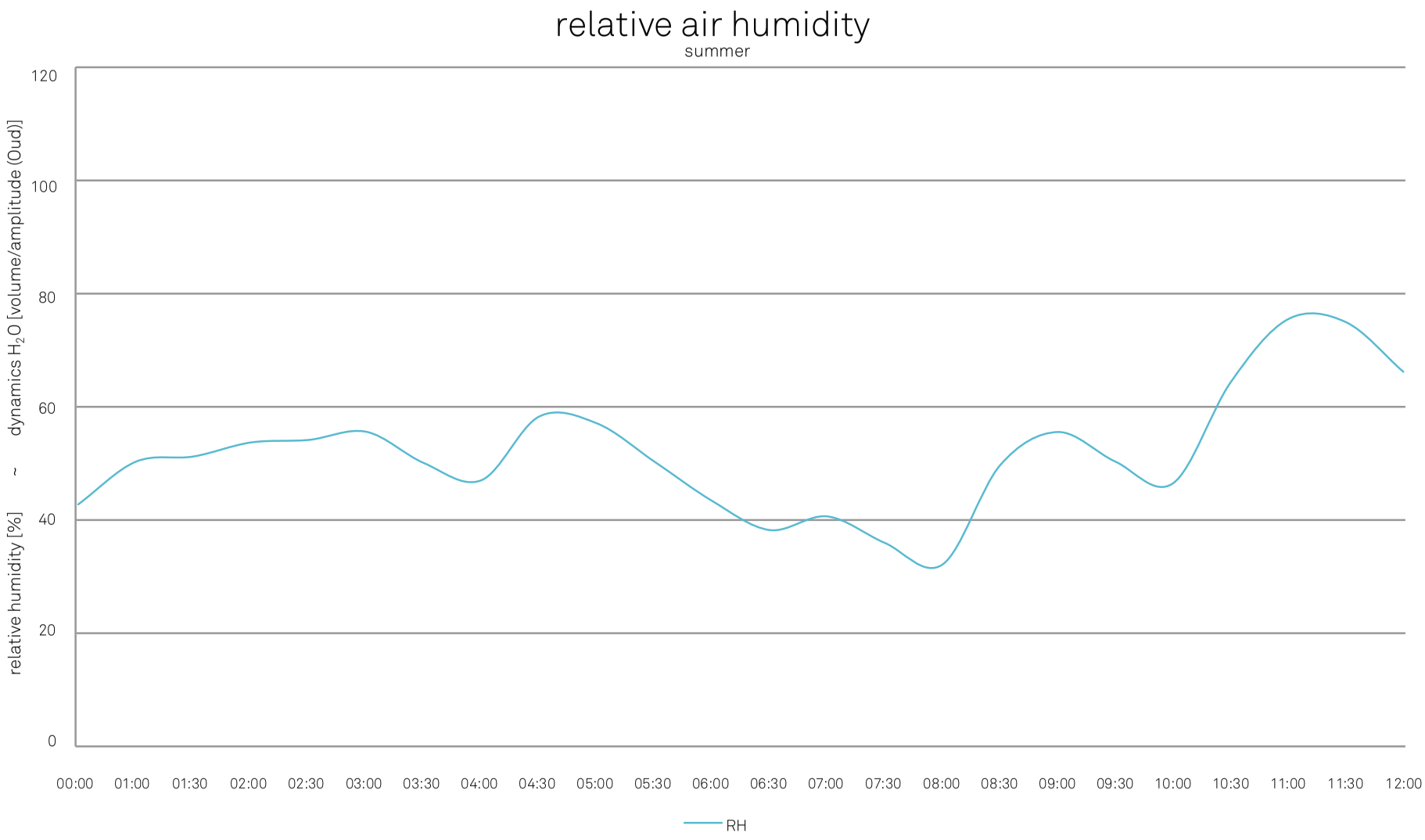
11:00
11:30
12:00
RH


relative air humidity
summer
relative humidity [%] ~ dynamics H_2O [volume/amplitude (Oud)]
120
100
80
60
40
20
0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
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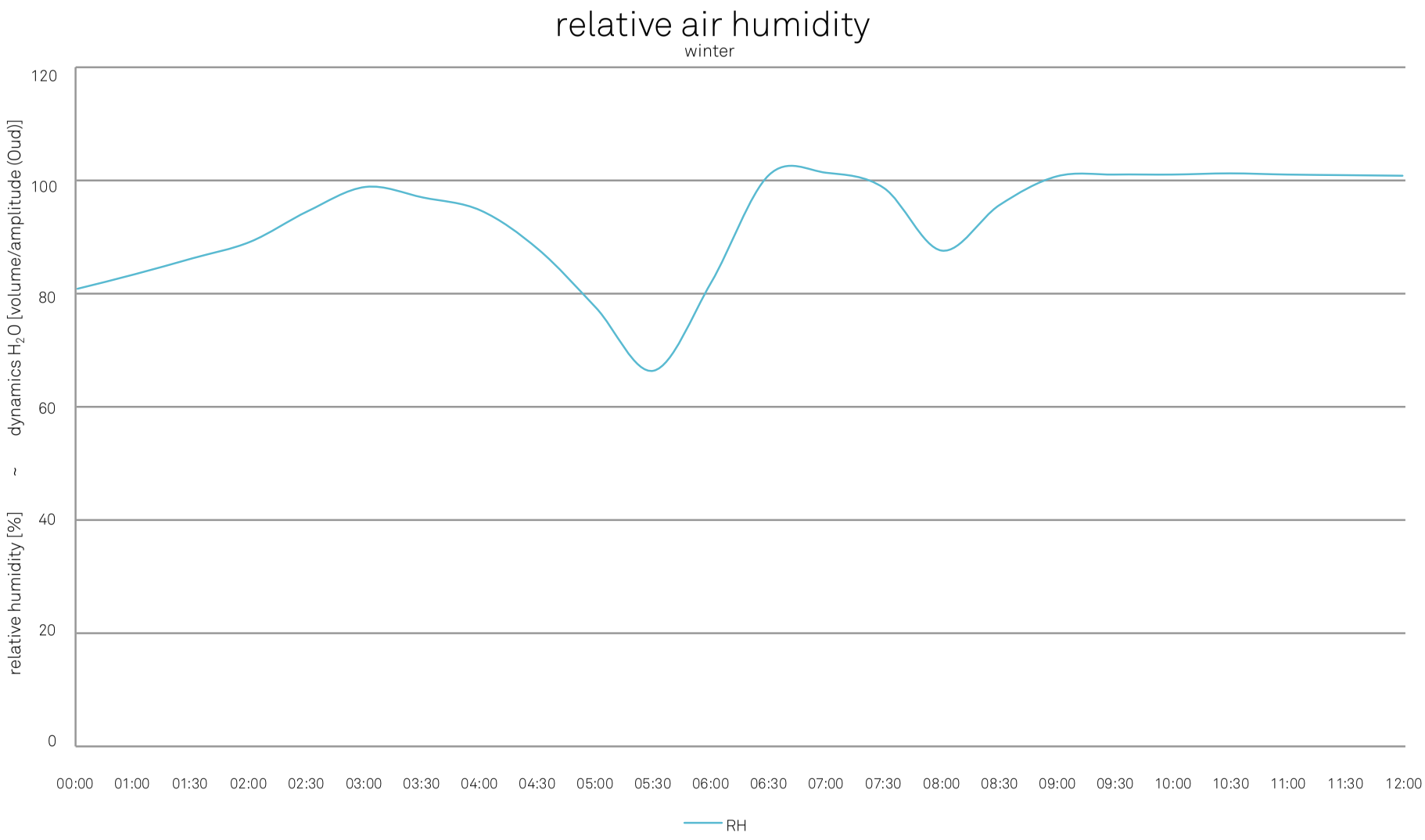
RH


relative air humidity
winter
relative humidity [%] ~ dynamics H_2O [volume/amplitude (Oud)]
120
100
80
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01:00
01:30
02:00
02:30
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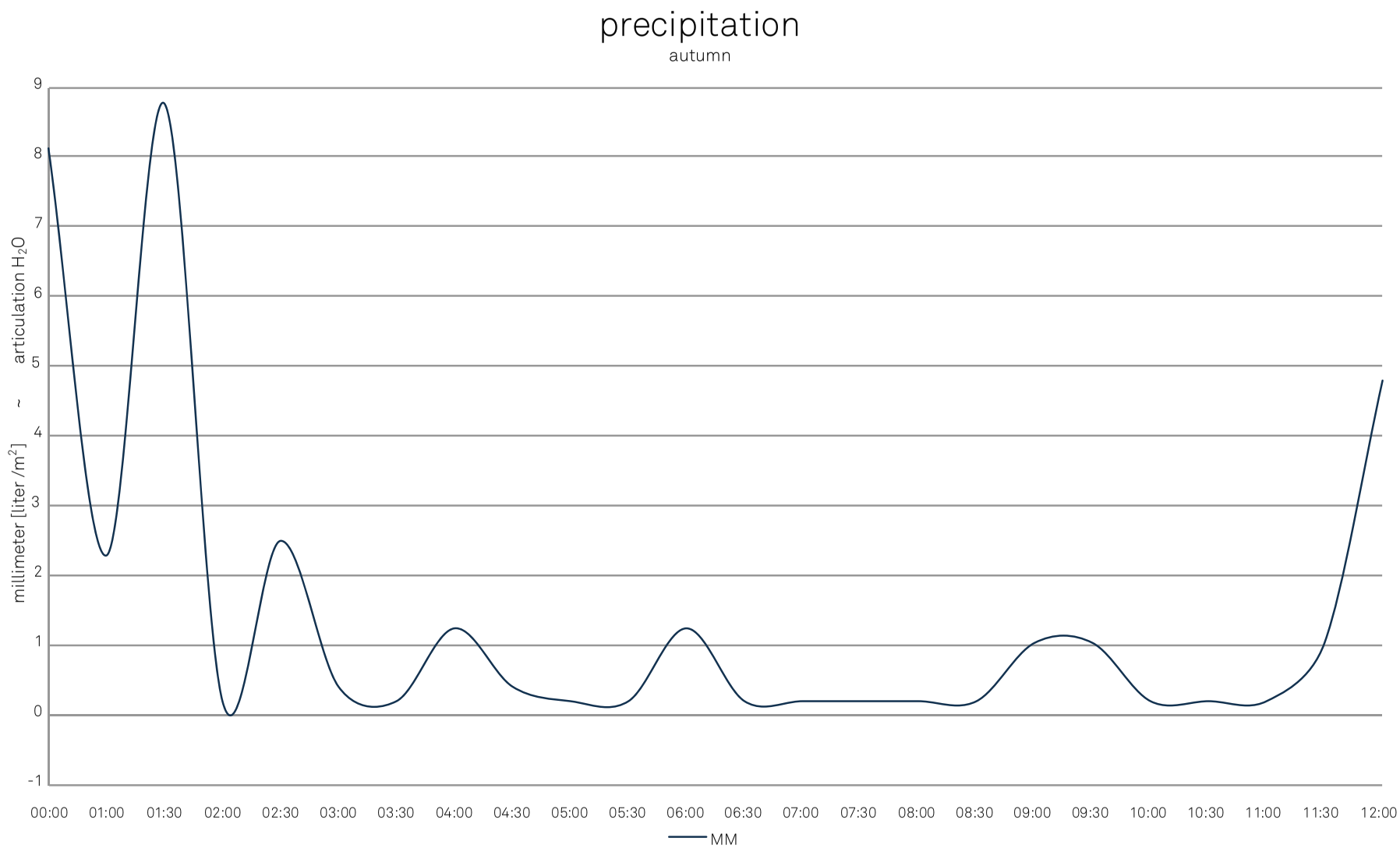
RH


precipitation
autumn
millimeter [liter /m²] ~ articulation H₂O
9
8
7
6
5
4
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2
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-1
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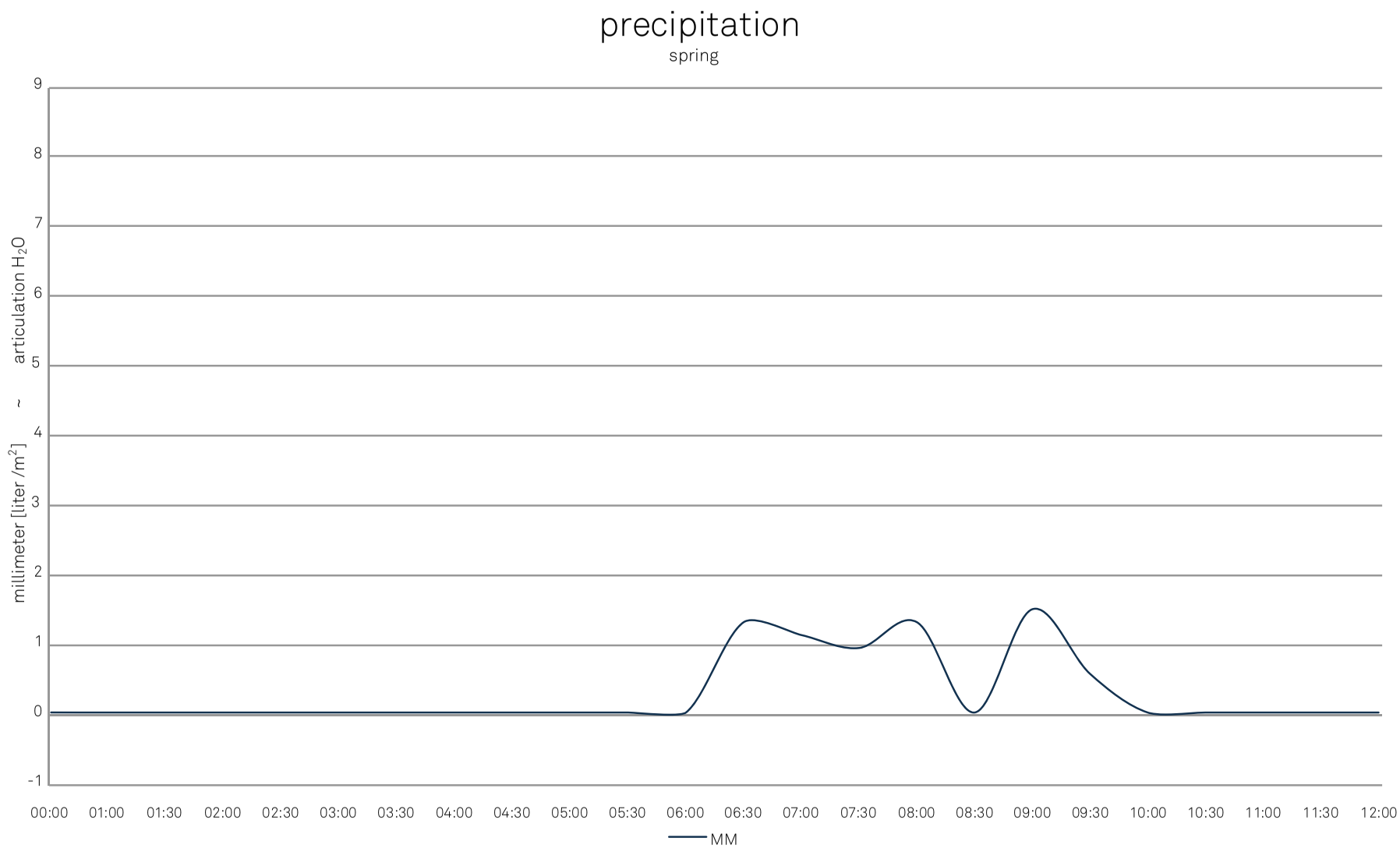
MM


precipitation
spring
millimeter [liter /m²] ~ articulation H₂O
9
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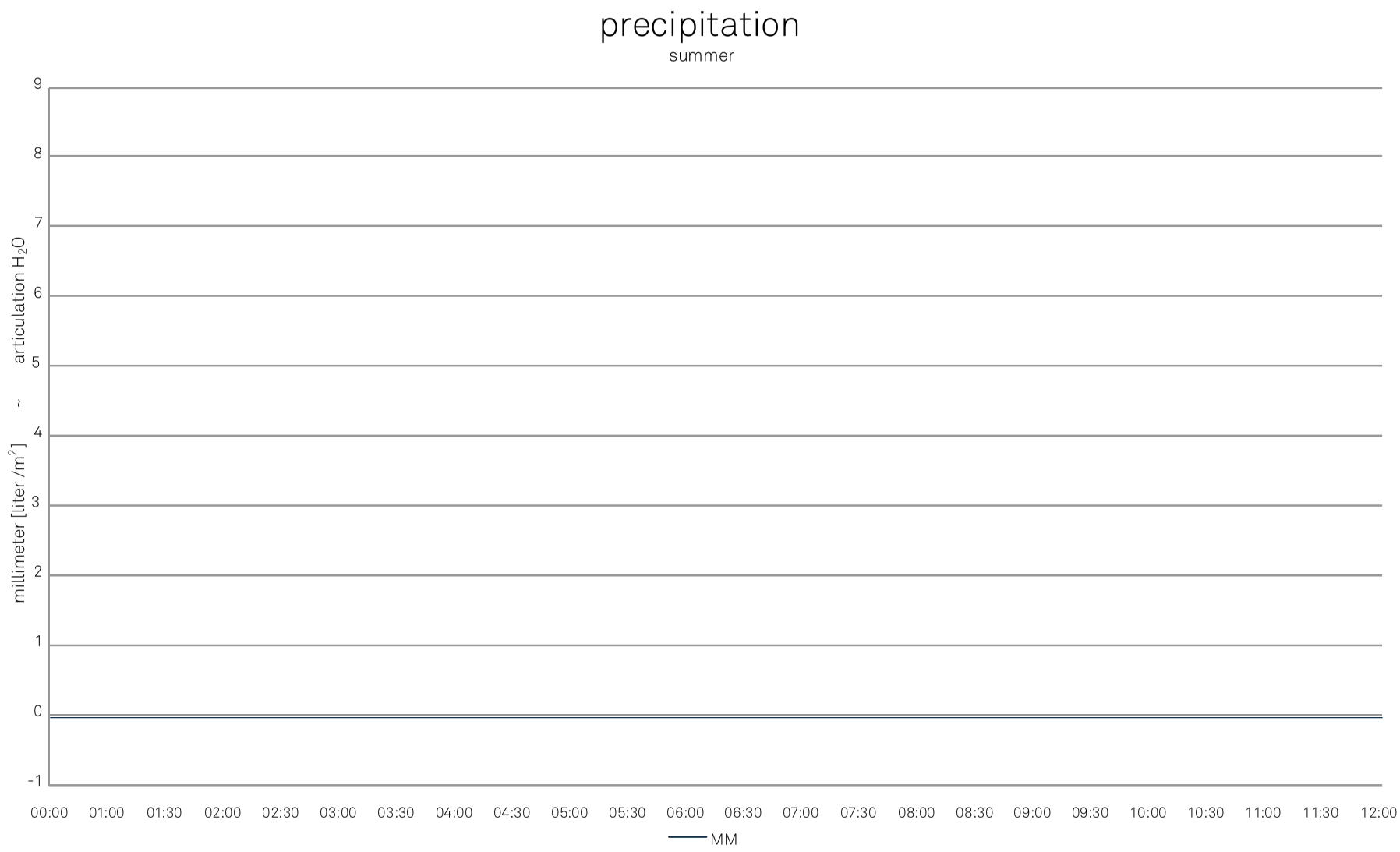
precipitation
summer
millimeter [liter /m²]
~ articulation H₂O
9
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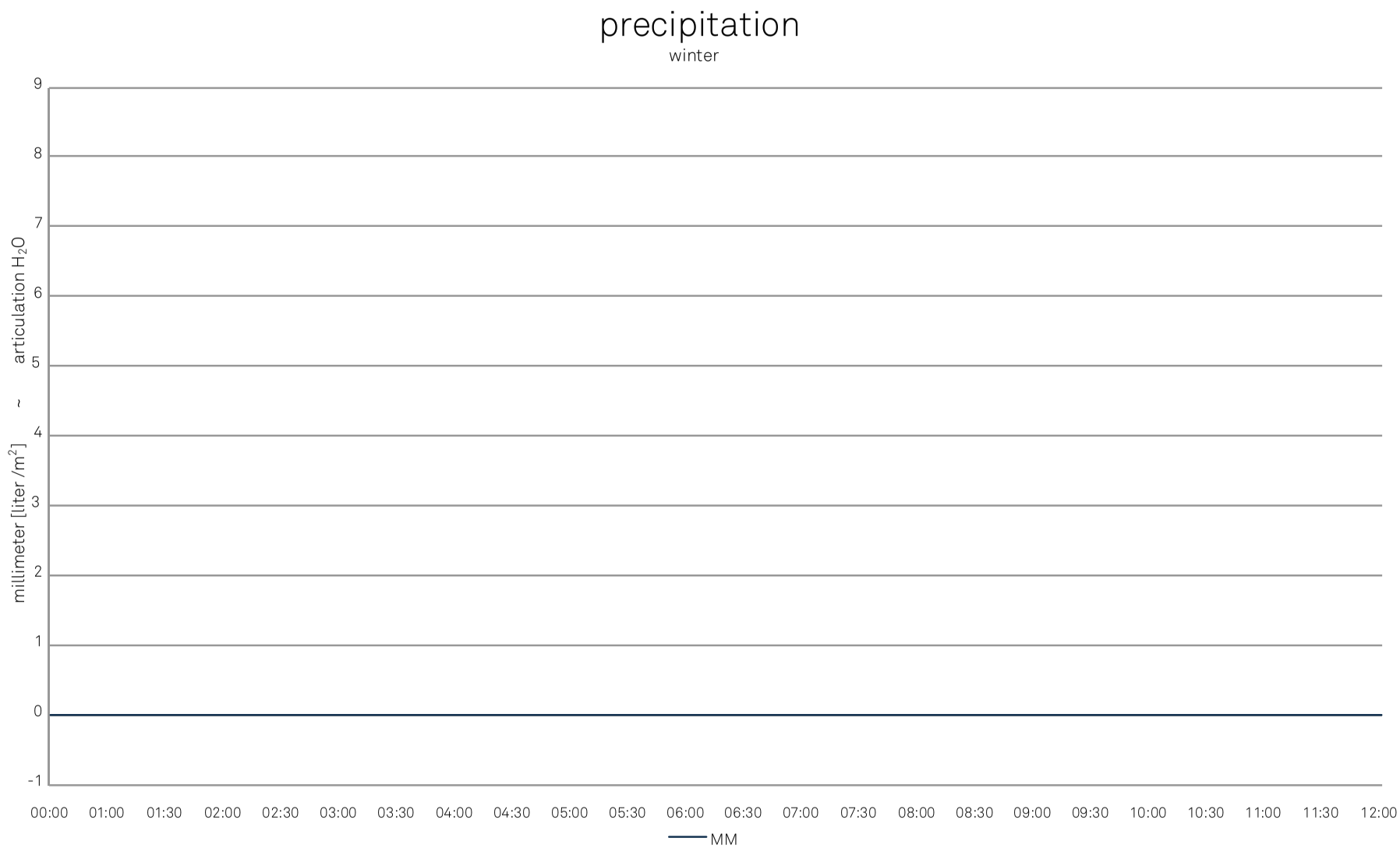
MM


precipitation
winter
millimeter [liter /m²]
~ articulation H₂O
9
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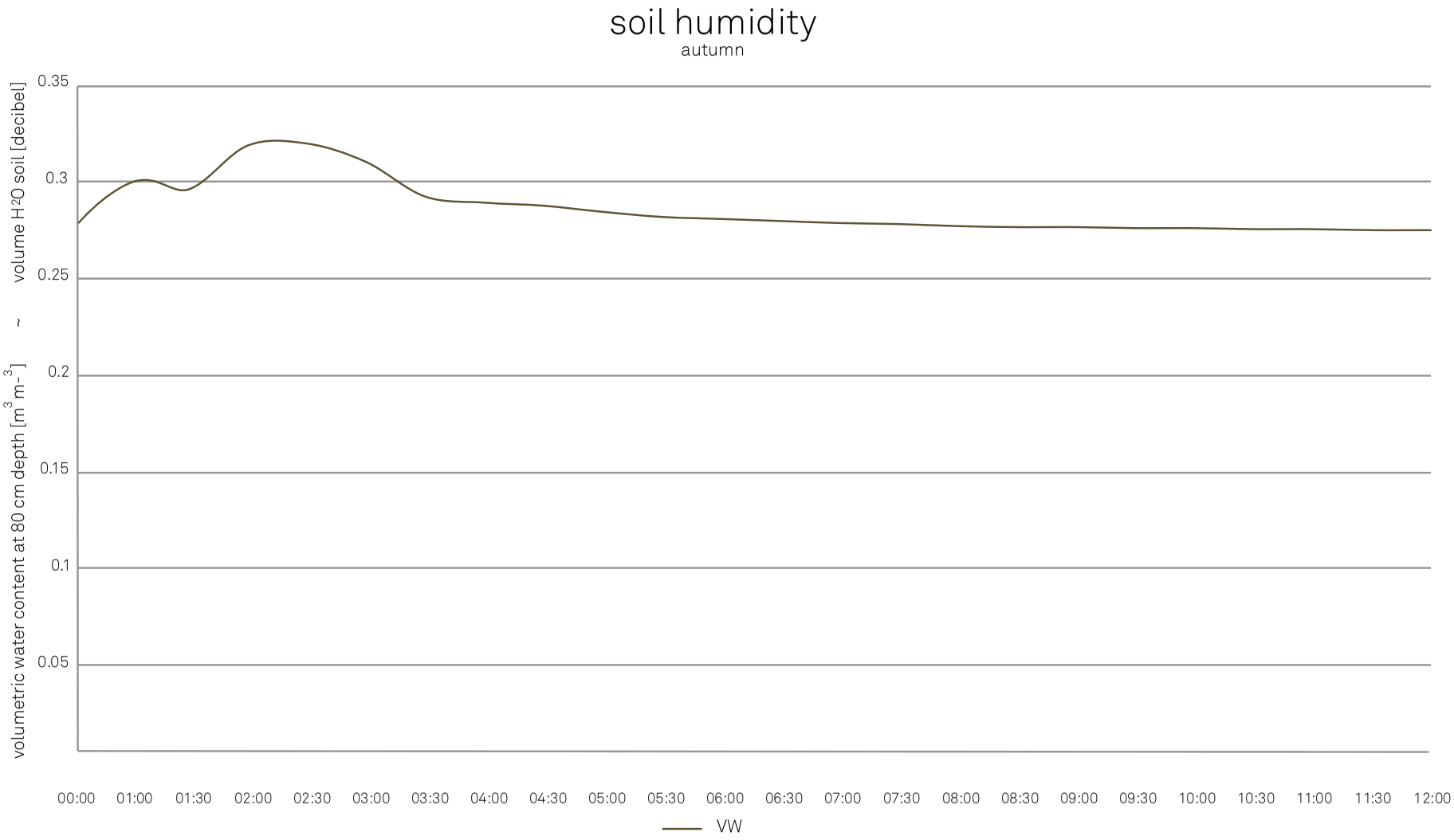
12:00
MM


soil humidity
autumn
volumetric water content at 80 cm depth [m3 m-3] ~ volume H2O soil [decibel]
0.35
0.3
0.25
0.2
0.15
0.1
0.05
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
05:30
06:00
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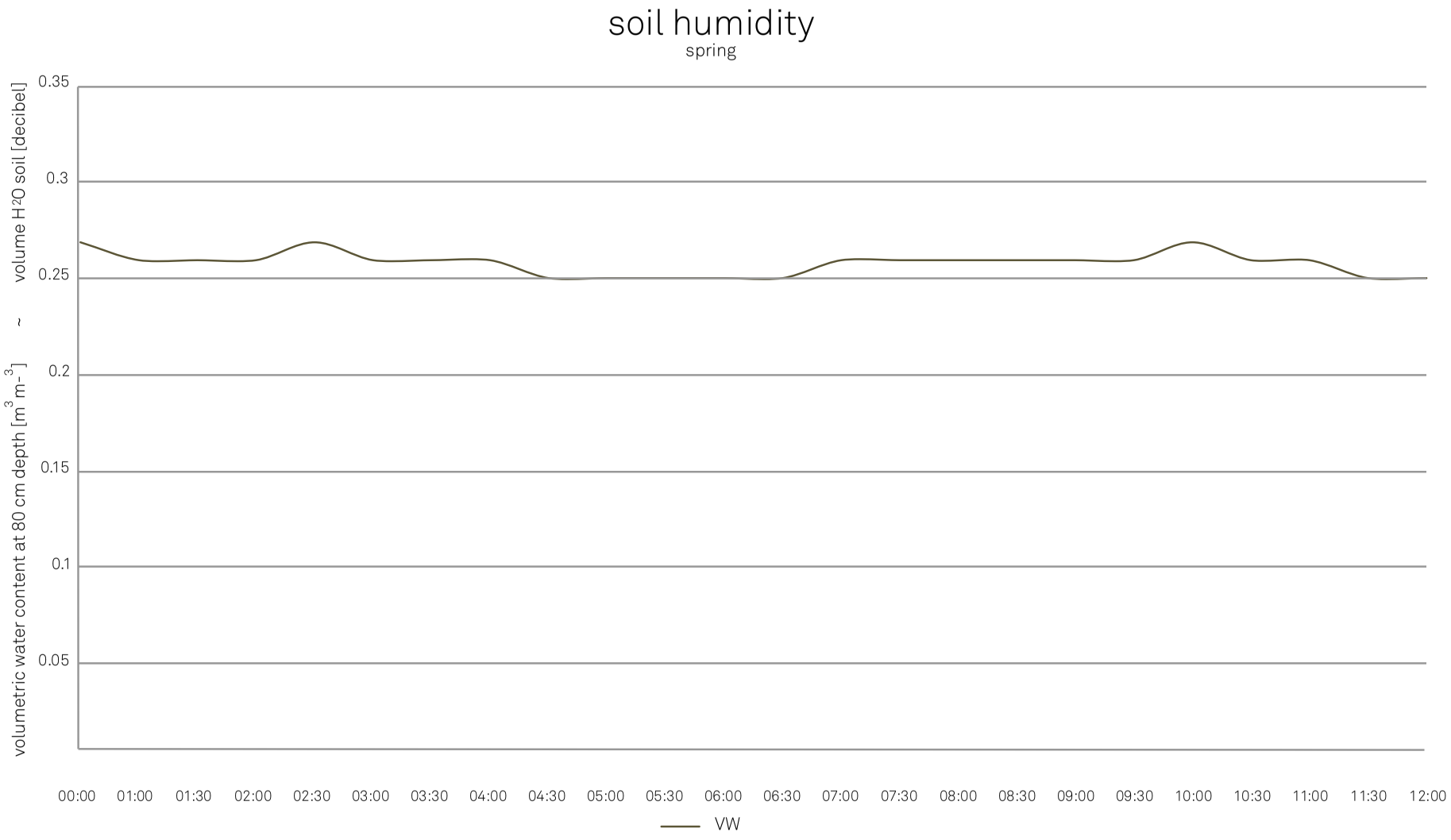
10:30
11:00
11:30
12:00
VW


soil humidity
spring
volumetric water content at 80 cm depth [m3 m-3] ~ volume H2O soil [decibel]
0.35
0.3
0.25
0.2
0.15
0.1
0.05
00:00
01:00
01:30
02:00
02:30
03:00
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08:30
09:00
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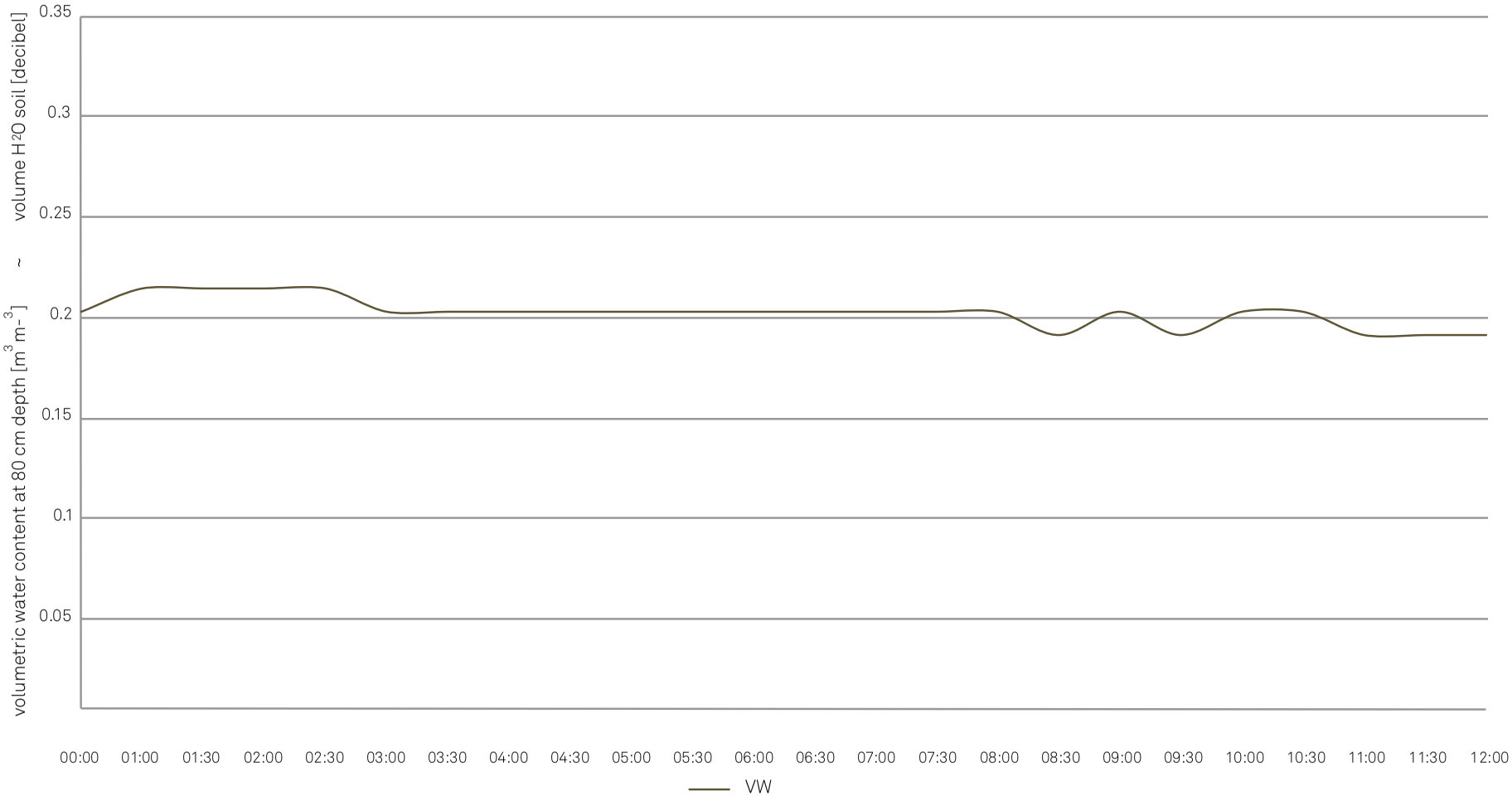
10:00
10:30
11:00
11:30
12:00
VW

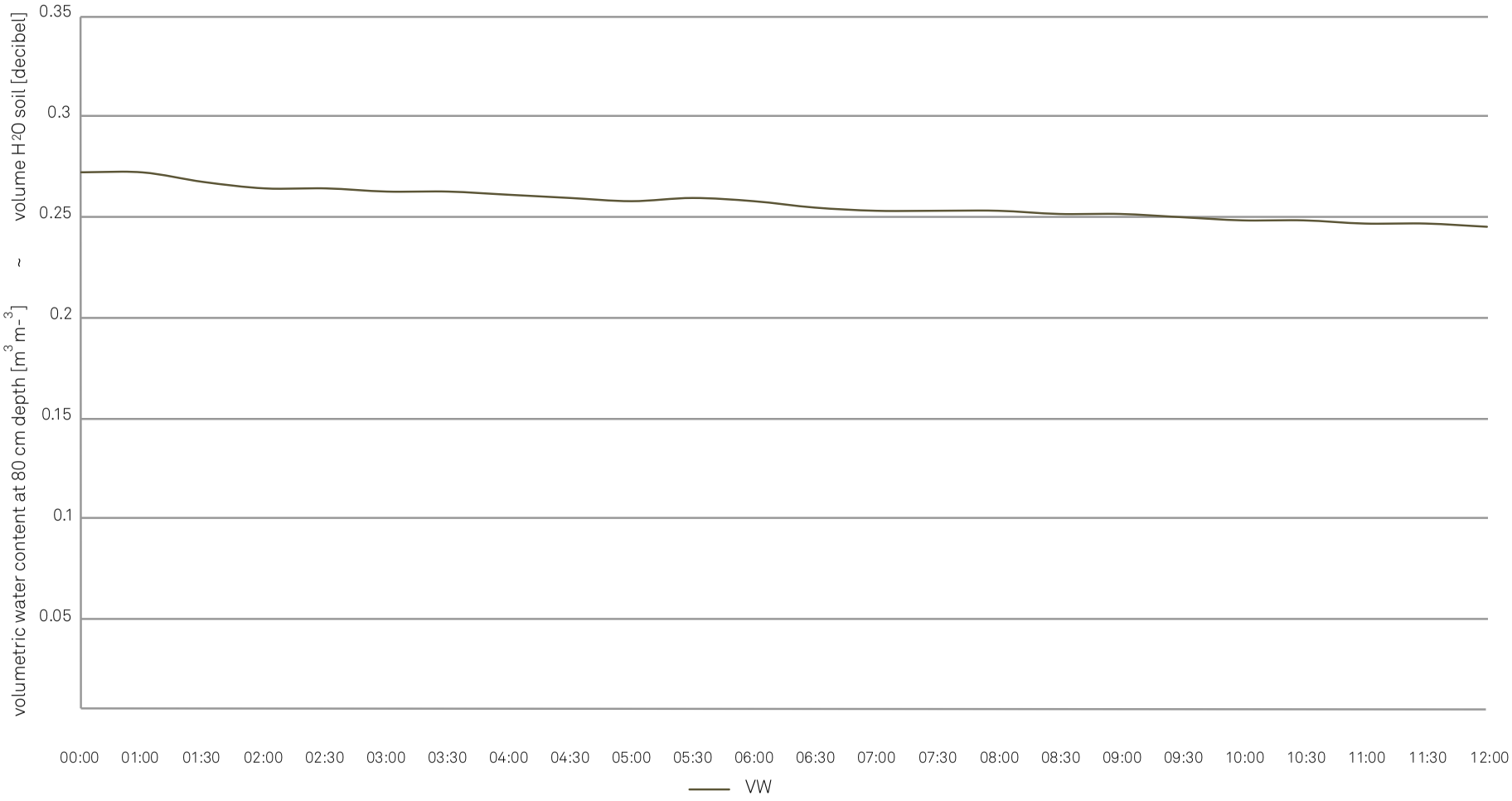
soil humidity

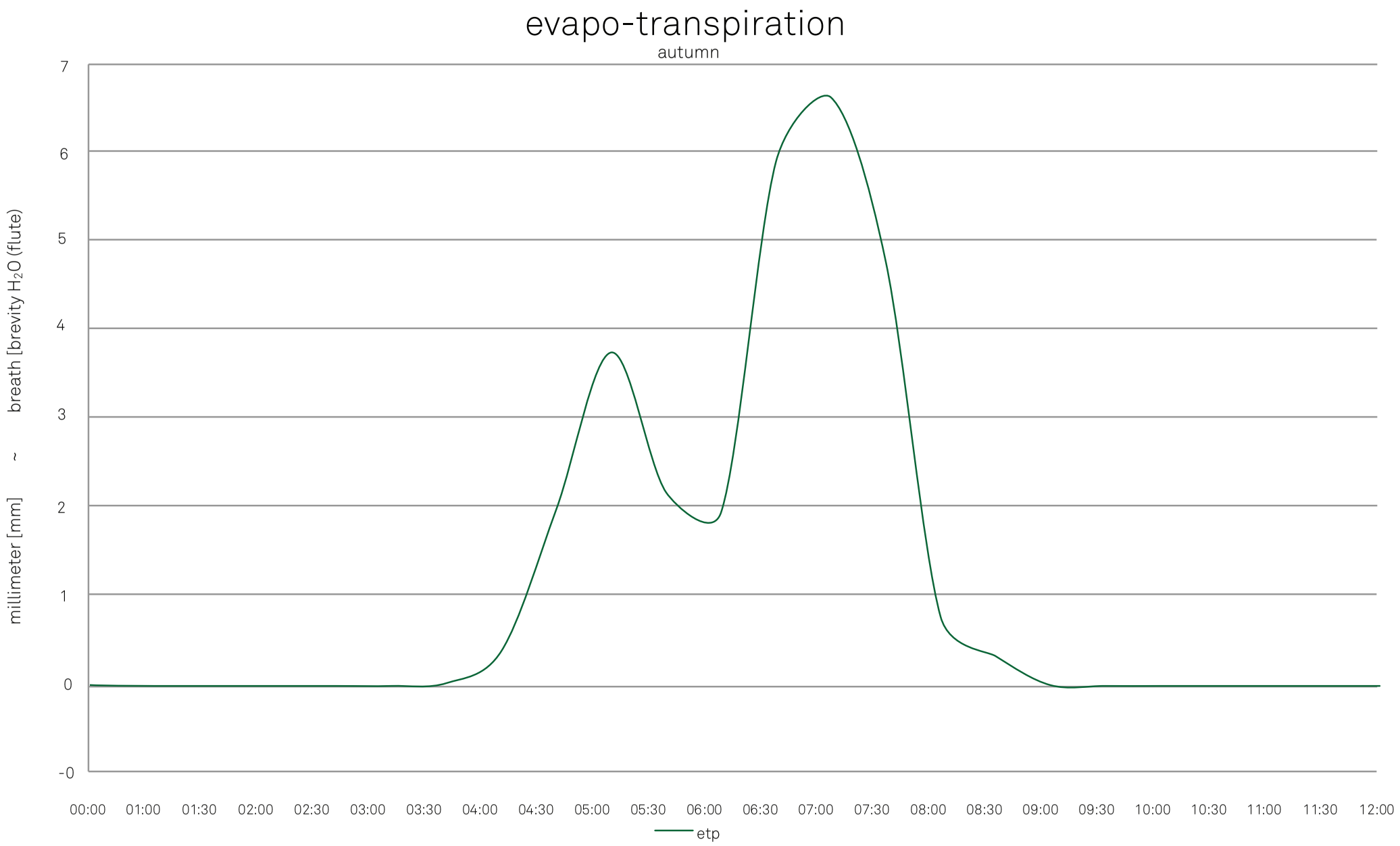
summer



soil humidity

winter




evapo-transpiration
autumn
millimeter [mm] ~ breath [brevity H_2O (flute)
7
6
5
4
3
2
1
0
-0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
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06:00
06:30
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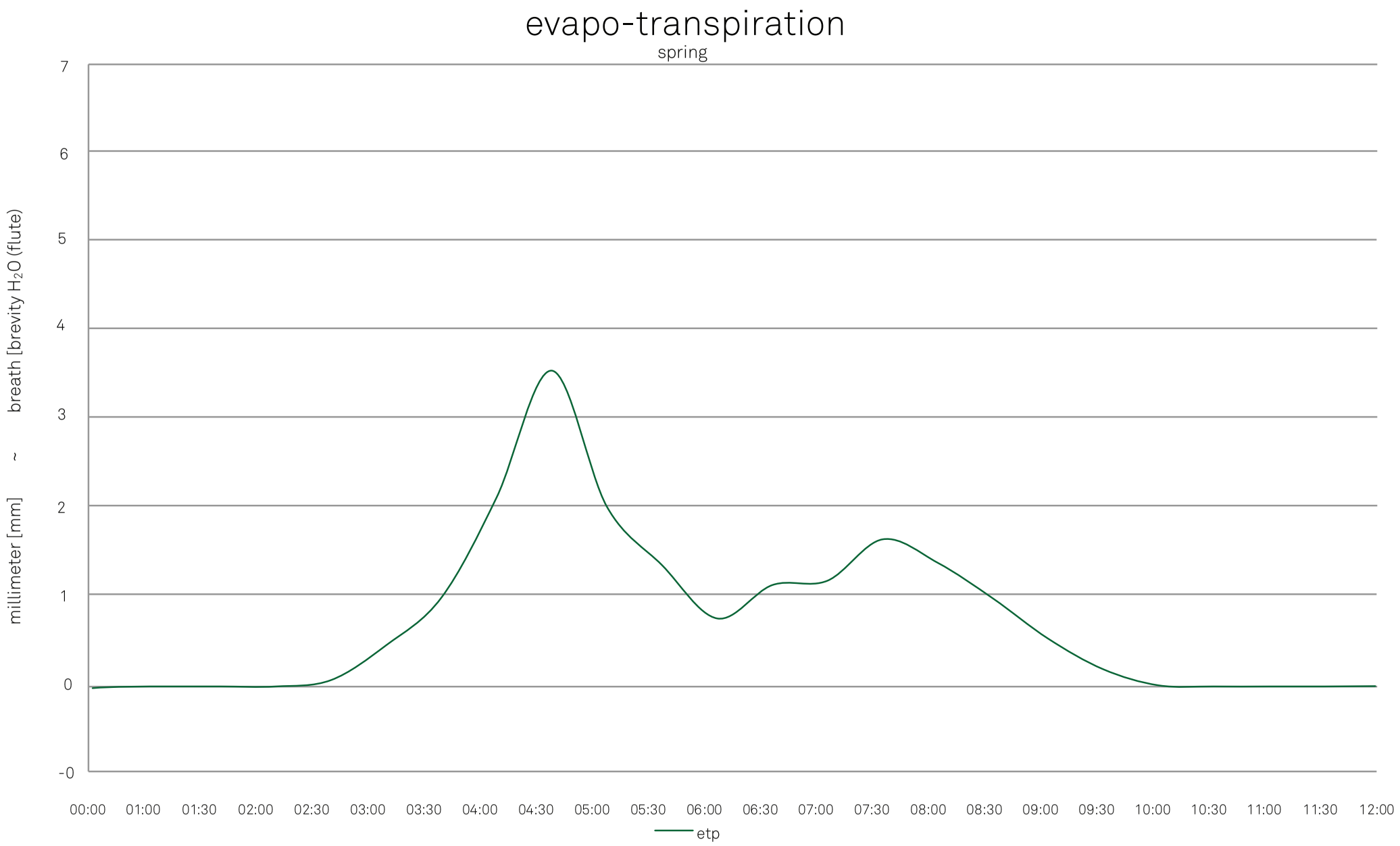
11:00
11:30
12:00
etp


evapo-transpiration
spring
millimeter [mm] ~ breath [brevity H_2O (flute)
7
6
5
4
3
2
1
0
-0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
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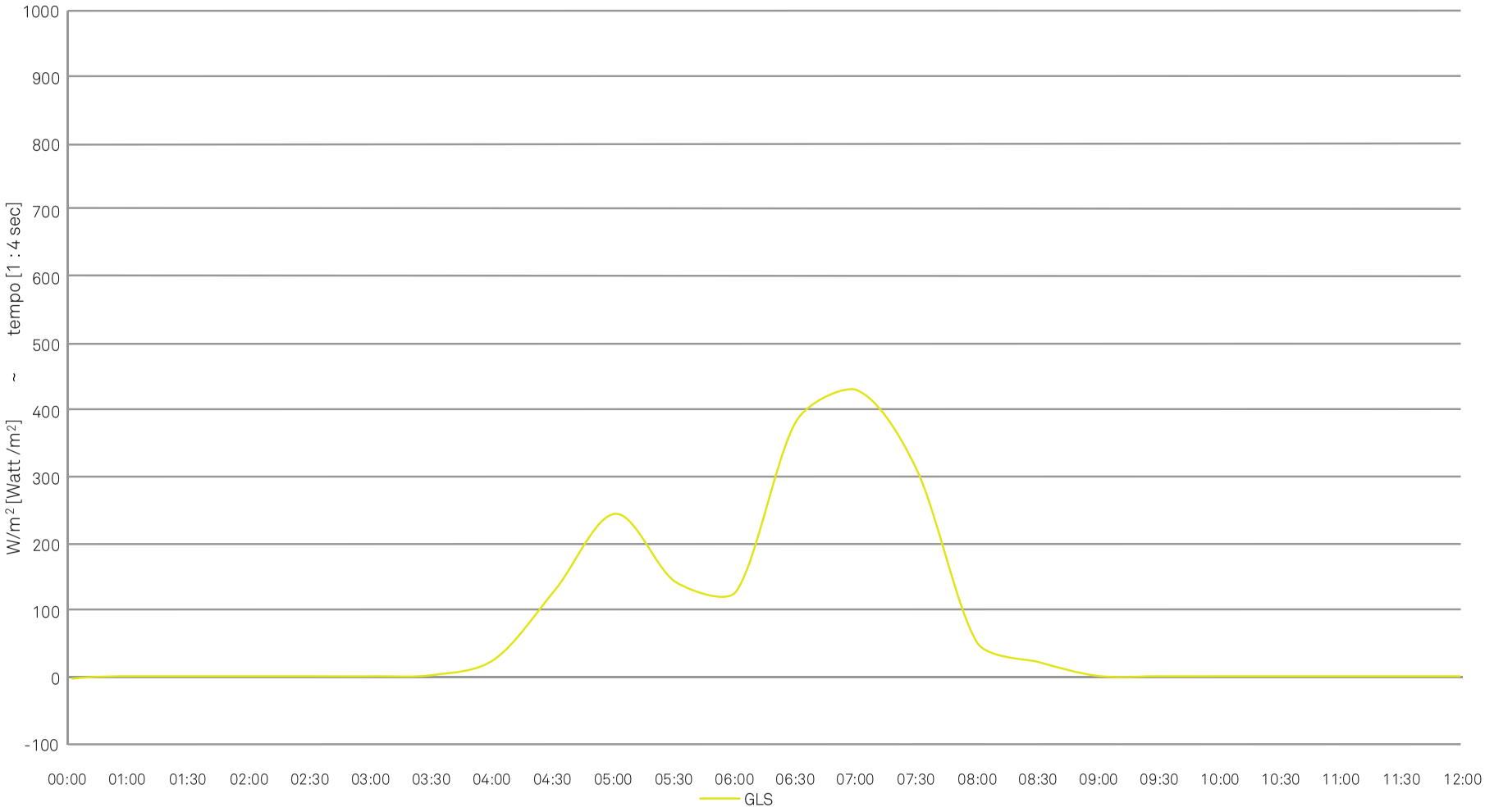
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
11:30
12:00
etp

evapo-transpiration
summer
millimeter [mm] ~ breath [brevity H_2O (flute)
7
6
5
4
3
2
1
0
-0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
05:30
06:00
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
11:30
12:00
etp

evapo-transpiration
winter
millimeter [mm] ~ breath [brevity H_2O (flute)
7
6
5
4
3
2
1
0
-0
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
05:30
06:00
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
11:30
12:00
etp

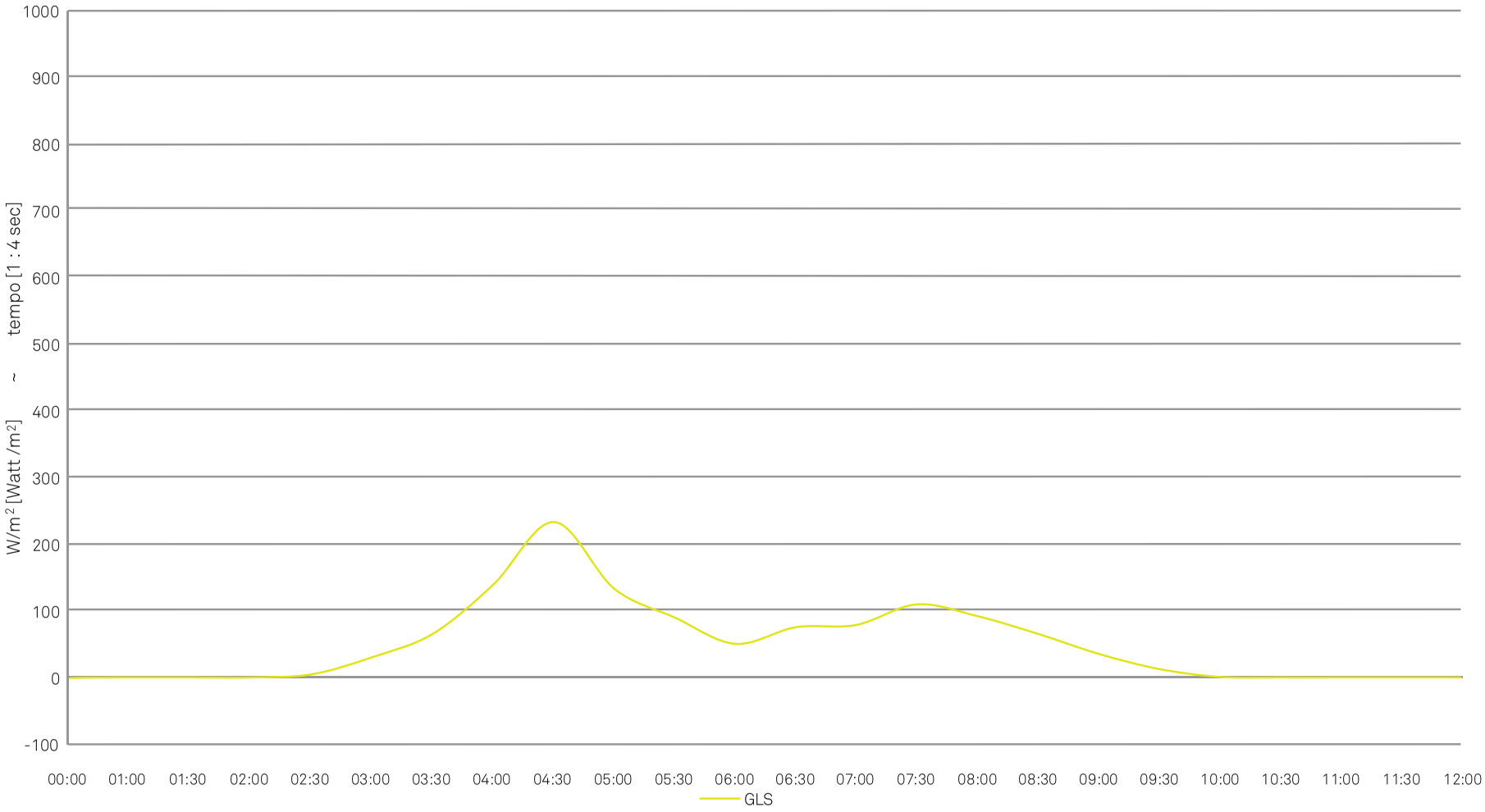
global solar radiation

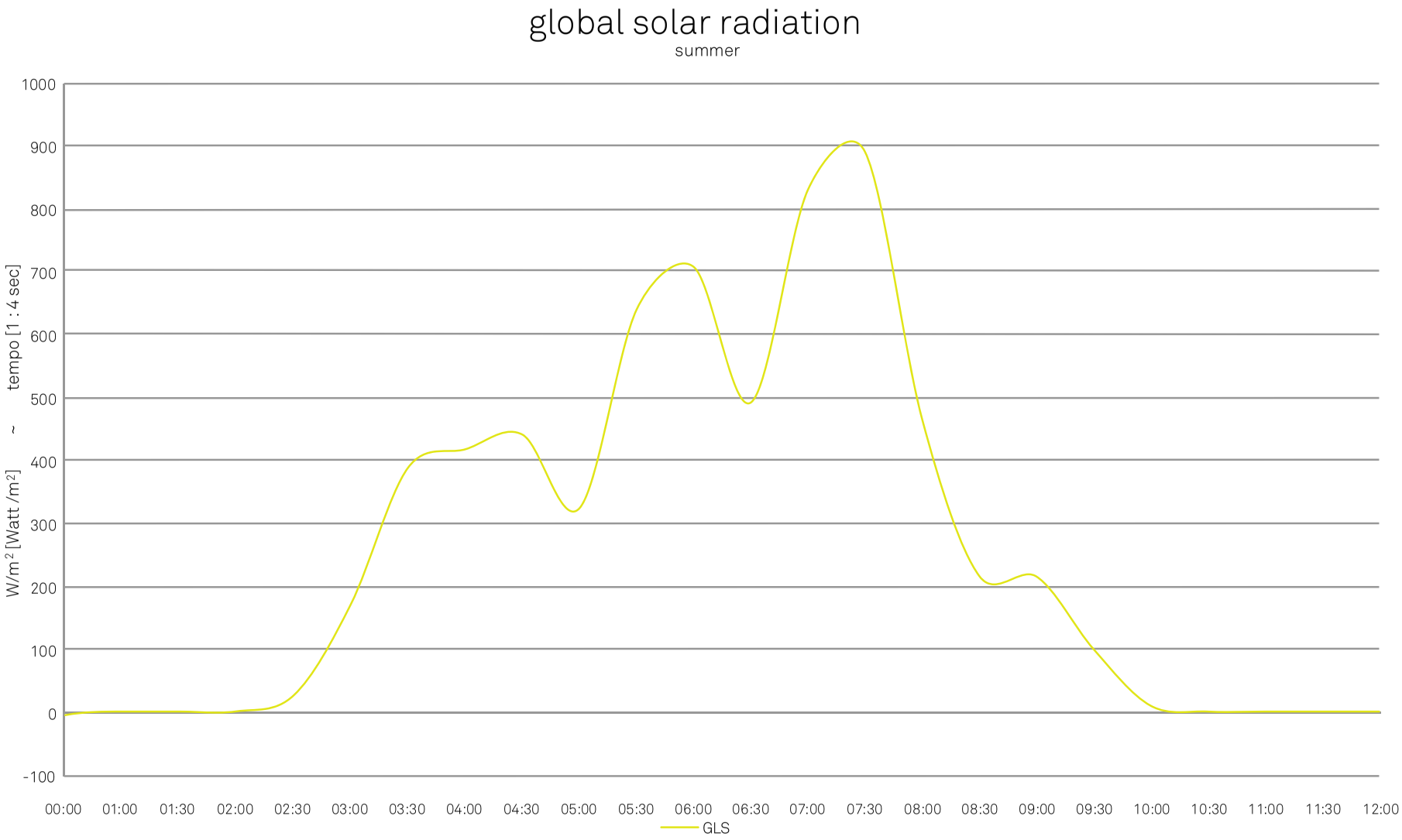
autumn

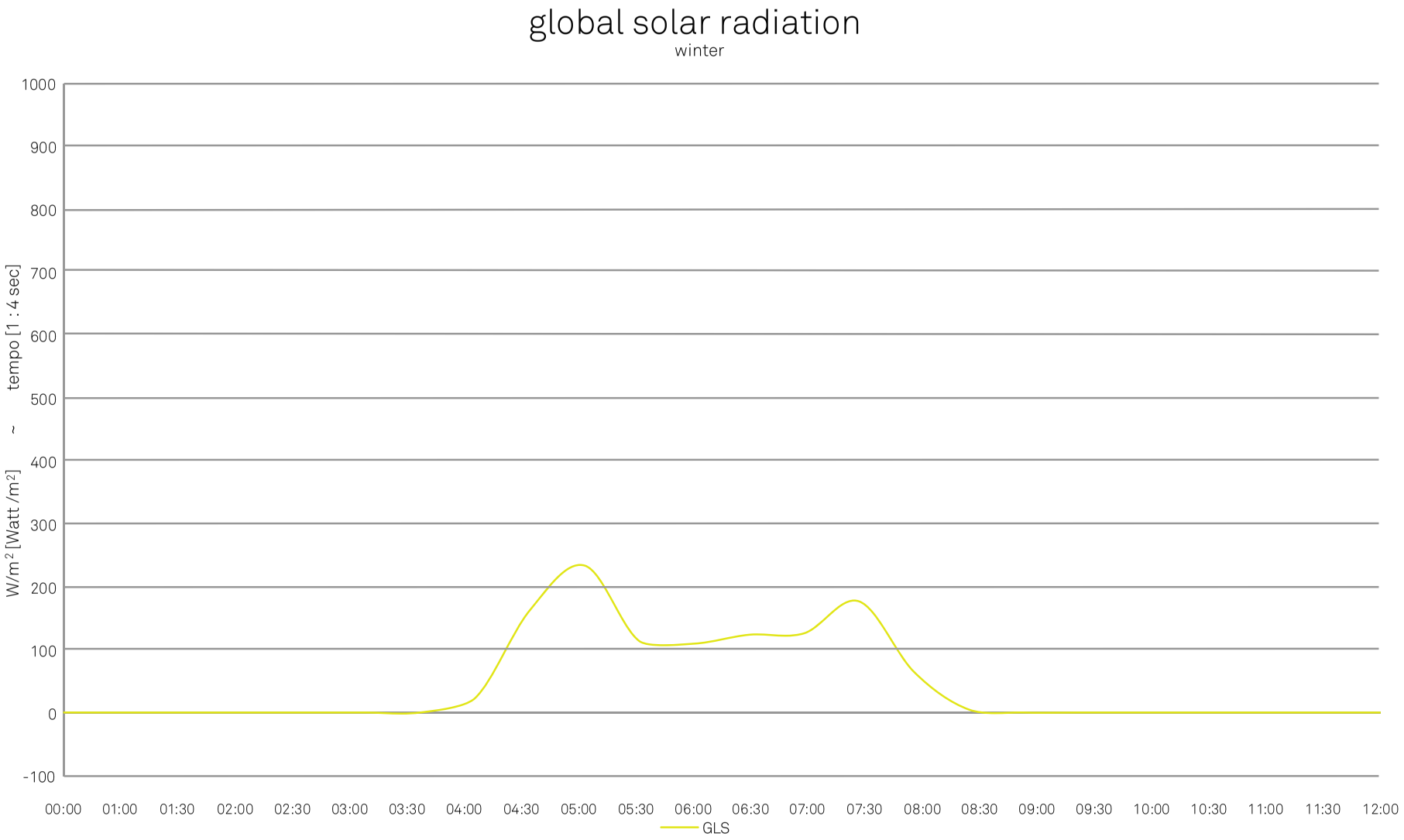


global solar radiation

spring




global solar radiation
summer
1000
900
800
700
600
500
400
300
200
100
0
-100
W/m² [Watt /m²]
~
tempo [1 : 4 sec]
00:00
01:00
01:30
02:00
02:30
03:00
03:30
04:00
04:30
05:00
05:30
06:00
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:00
11:30
12:00
GLS


global solar radiation
winter
1000
900
800
700
600
500
400
300
200
100
0
-100
W/m² [Watt /m²] ~ tempo [1 : 4 sec]
00:00
01:00
01:30
02:00
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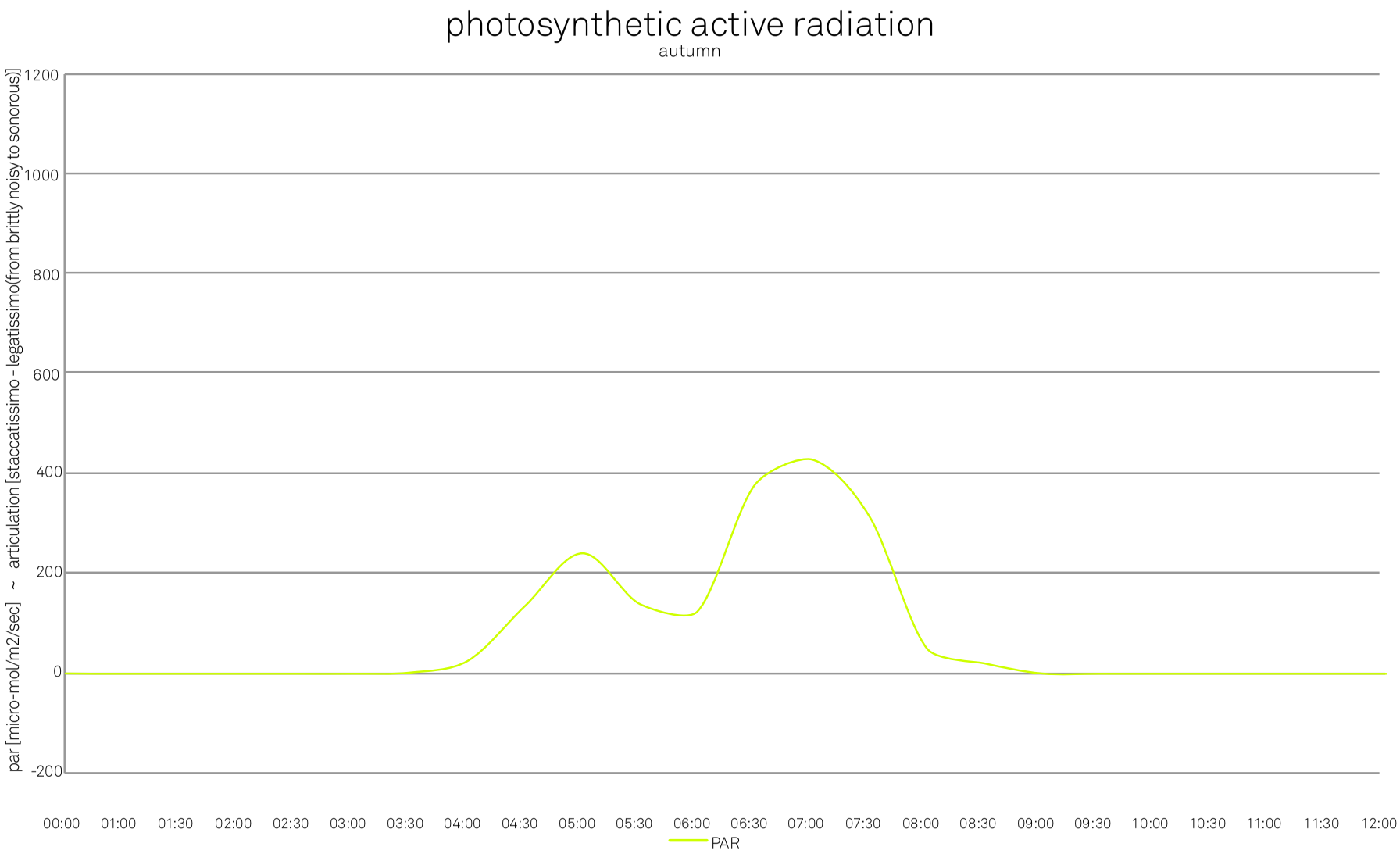
GLS


photosynthetic active radiation
autumn
par [micro-mol/m2/sec] ~ articulation [staccatissimo - legatissimo(from brittly noisy to sonorous)]
1200
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400
200
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-200
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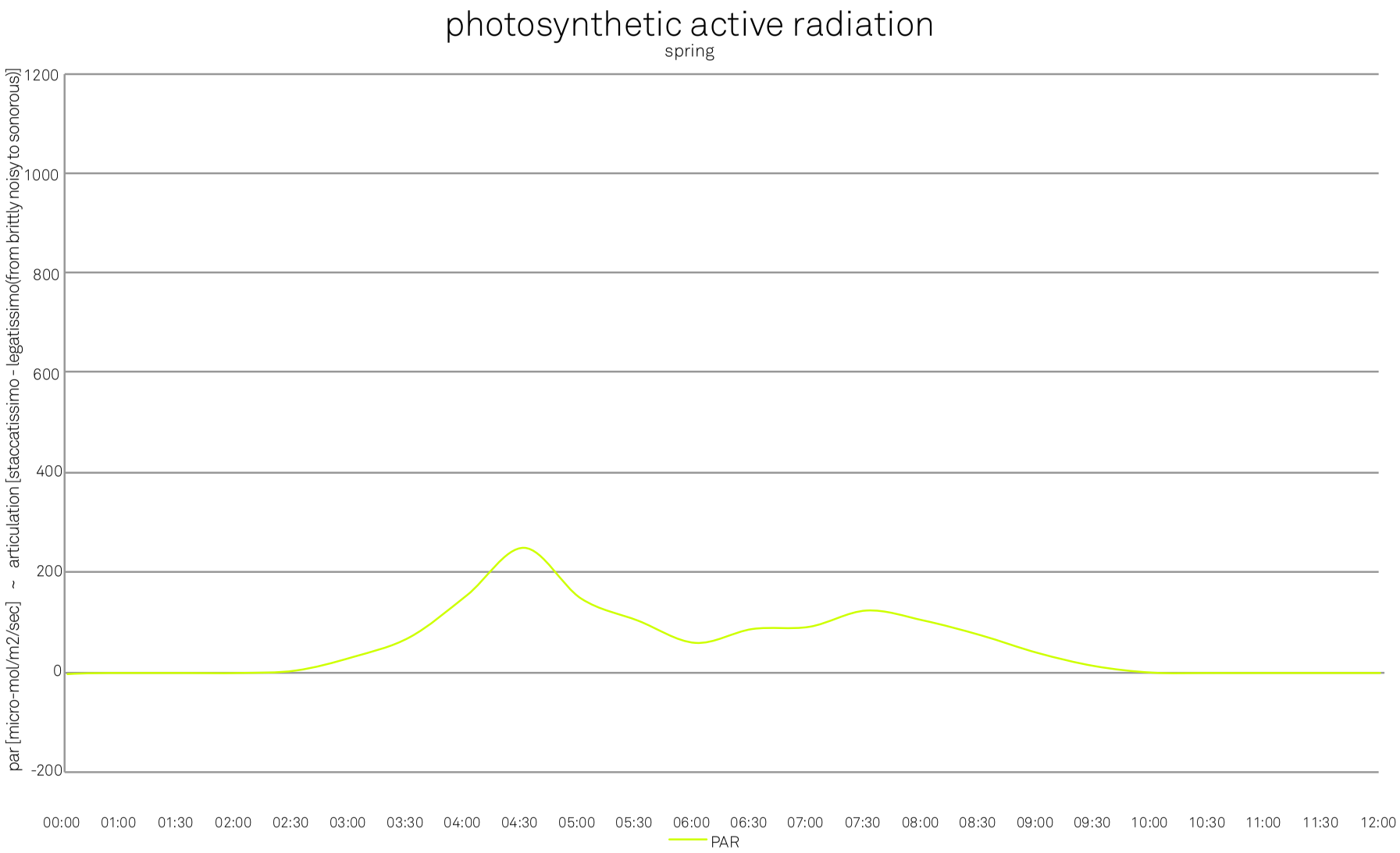
PAR


photosynthetic active radiation
spring
par [micro-mol/m2/sec] ~ articulation [staccatissimo - legatissimo(from brittly noisy to sonorous)]
1200
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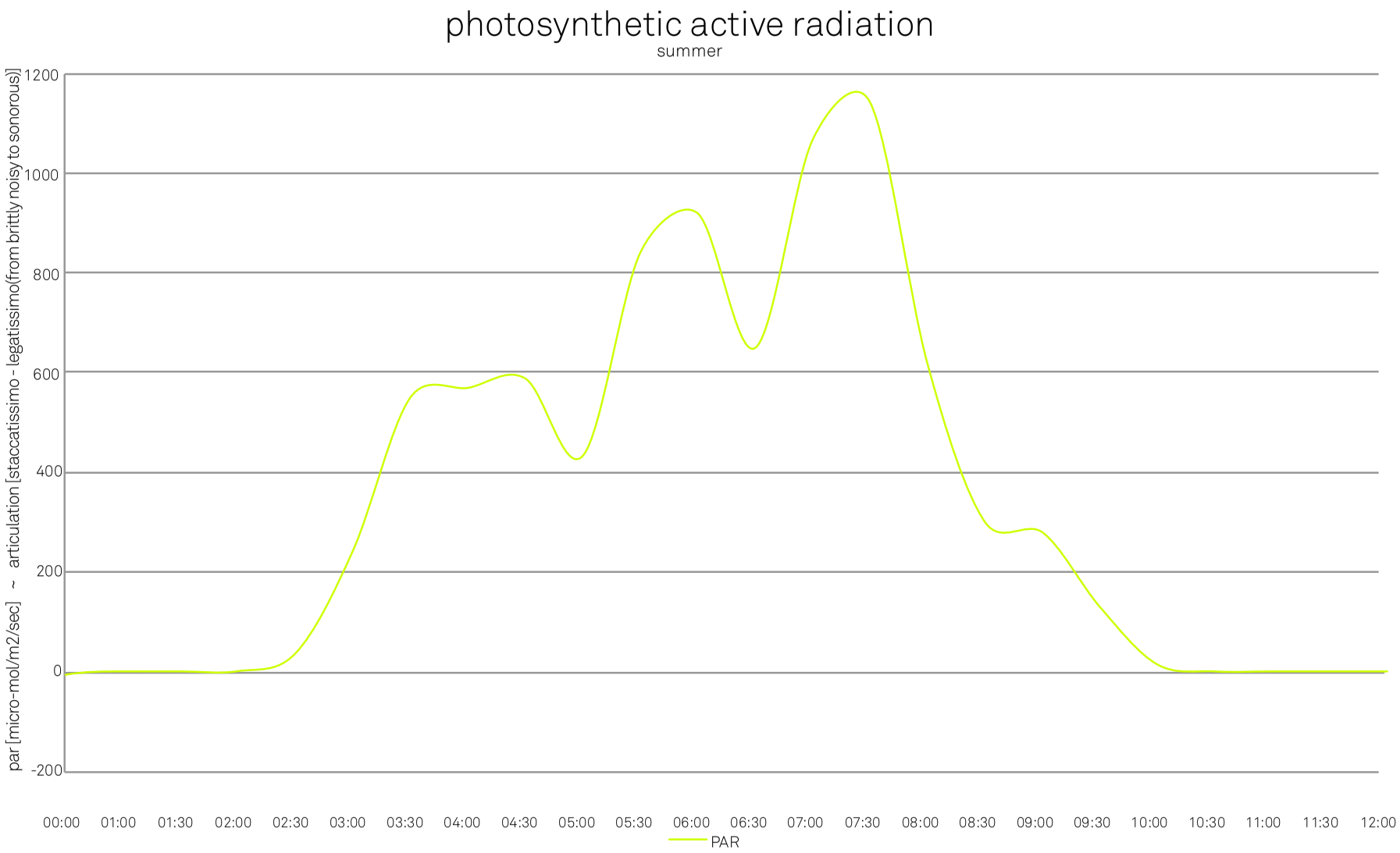
PAR


photosynthetic active radiation
summer
par [micro-mol/m2/sec] ~ articulation [staccatissimo - legatissimo(from brittly noisy to sonorous)]
1200
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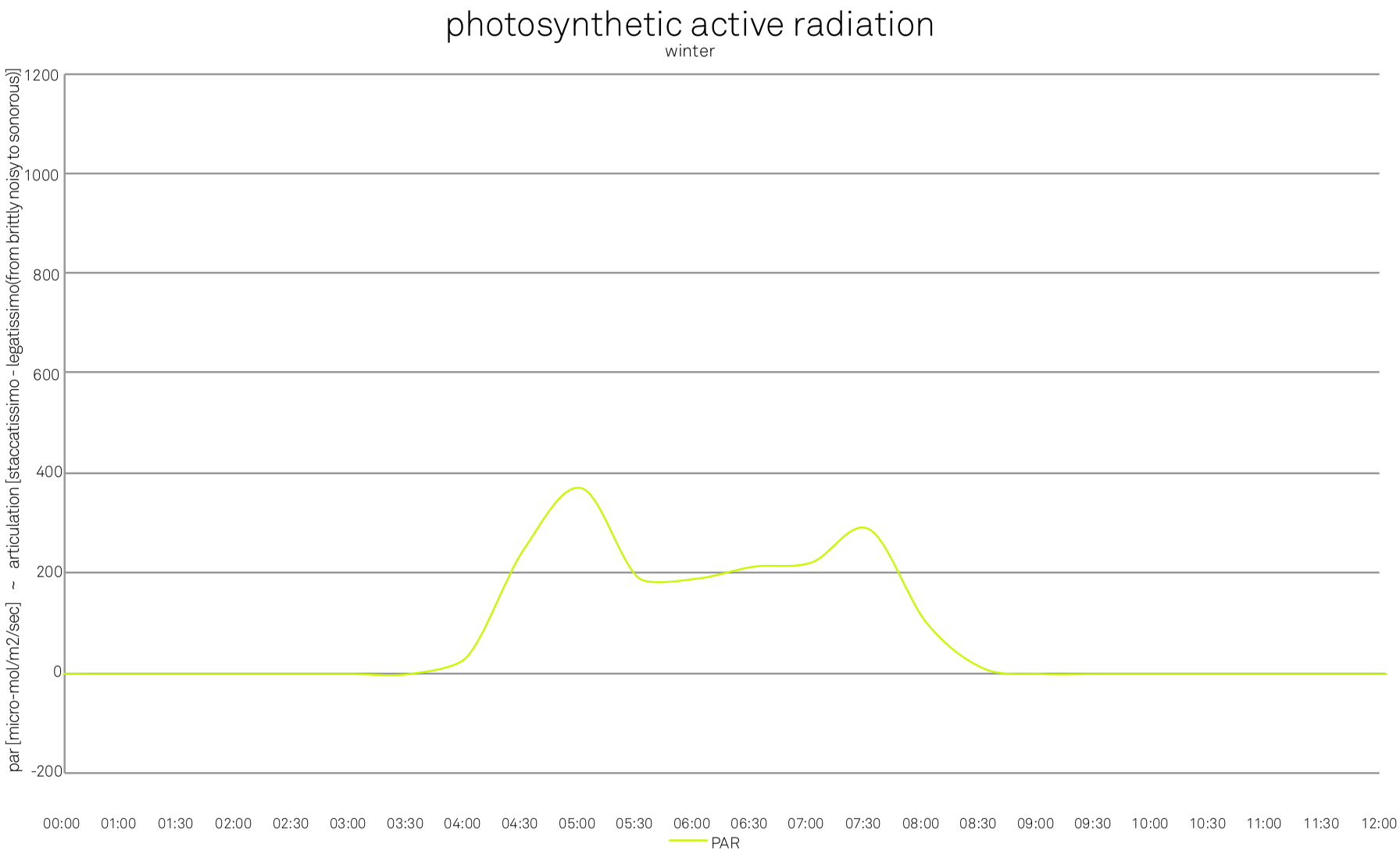
PAR


photosynthetic active radiation
winter
par [micro-mol/m2/sec] ~ articulation [staccatissimo - legatissimo(from brittly noisy to sonorous)]
1200
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PAR