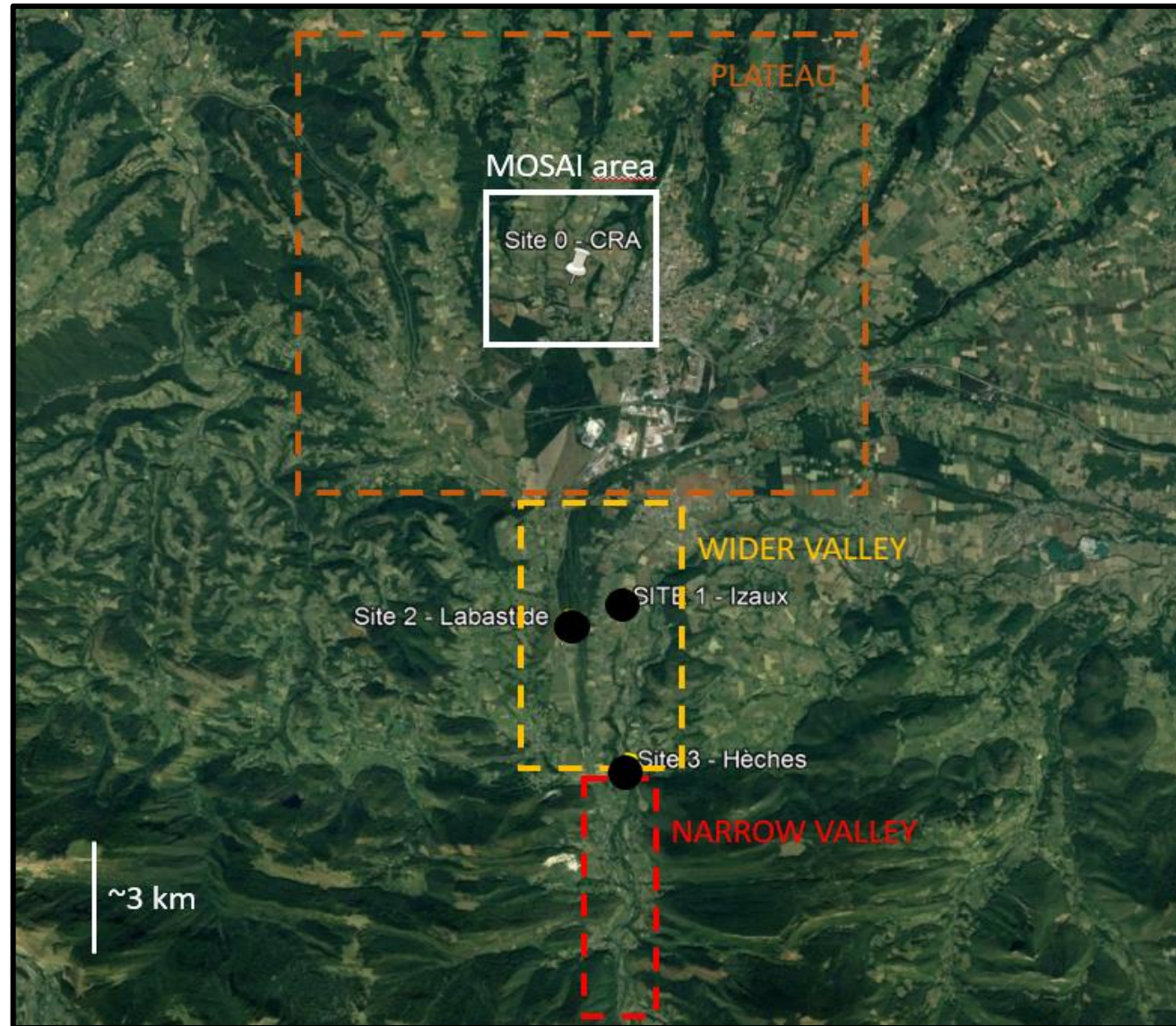


Aure Valley

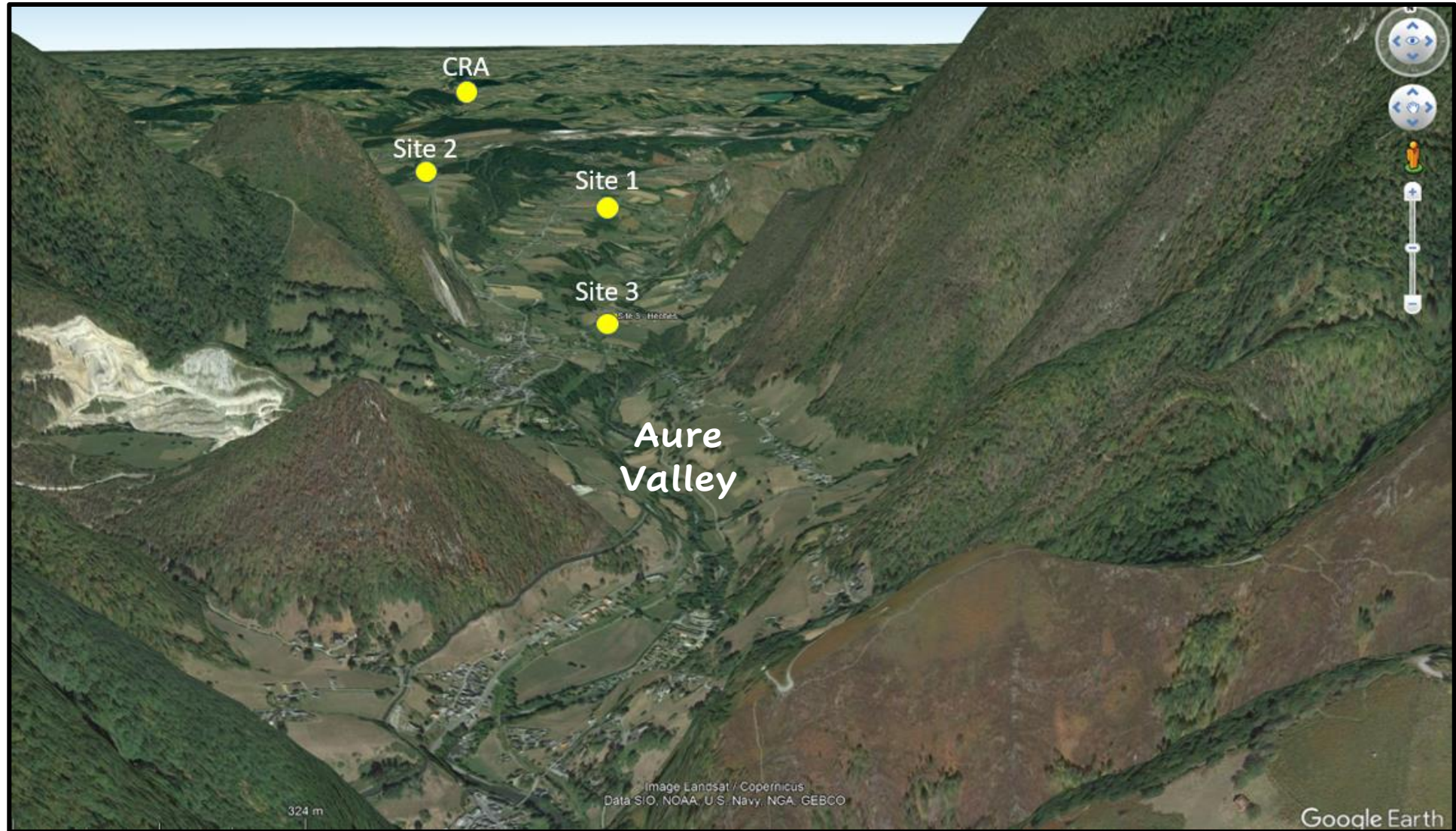
Some very first results from Observations

- 1. Introduction and experimental plan**
- 2. Period overview (April – June 2023)**
- 3. Sites comparison**
- 4. SPARV – MODEM radiosounding comparison**
- 5. Experimental plan for SOP 2 – August.**

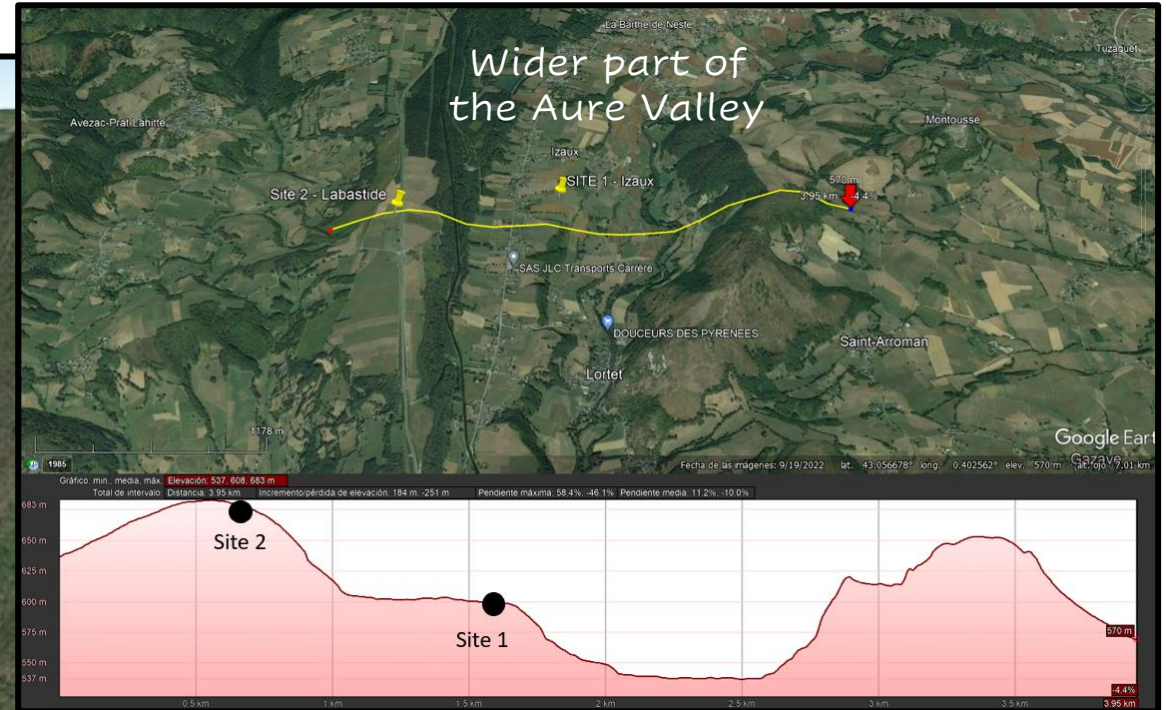
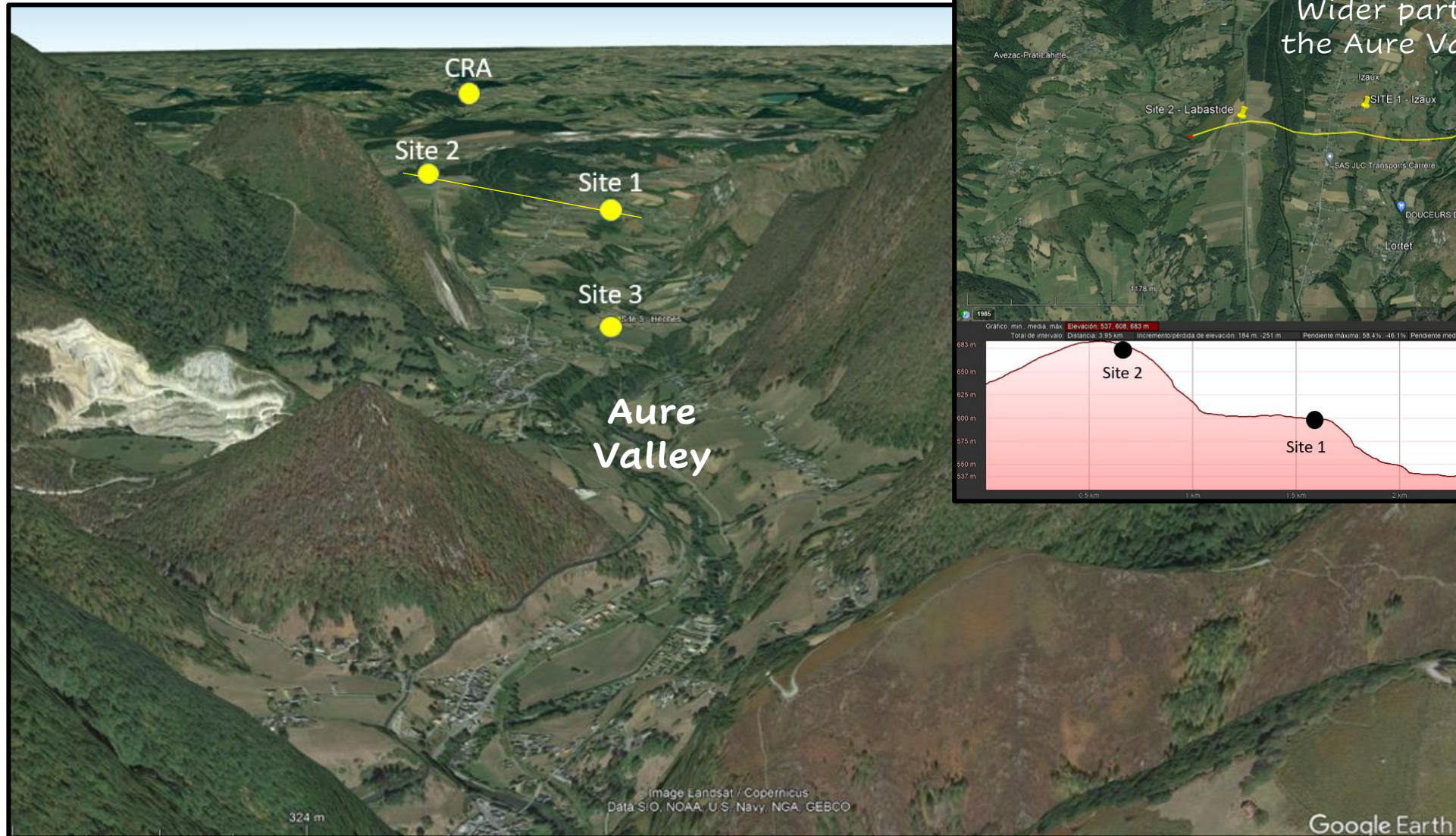
1. Introduction and experimental plan



1. Introduction and experimental plan

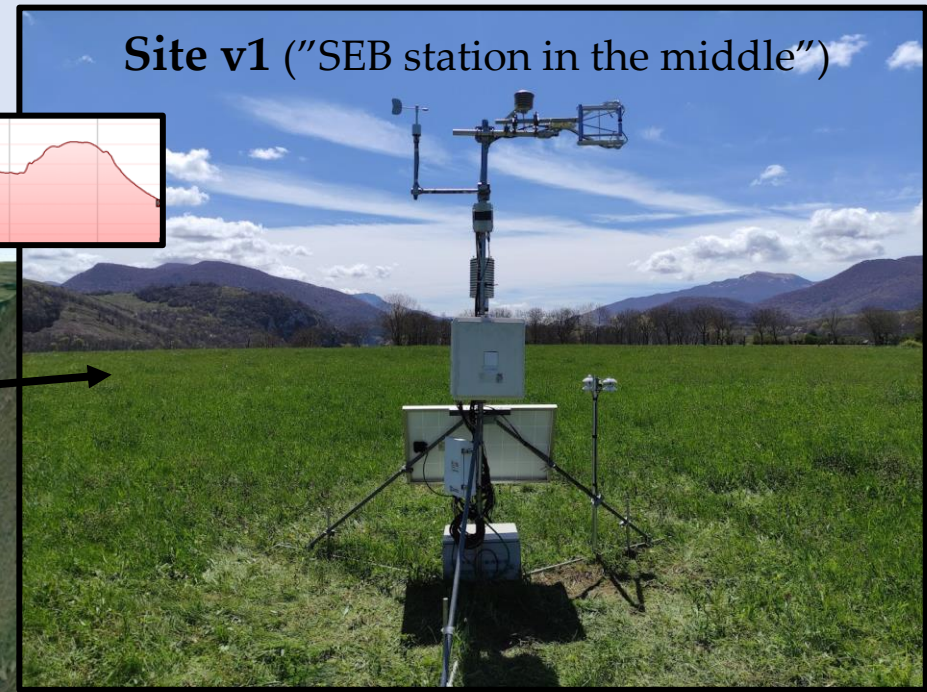


1. Introduction and experimental plan



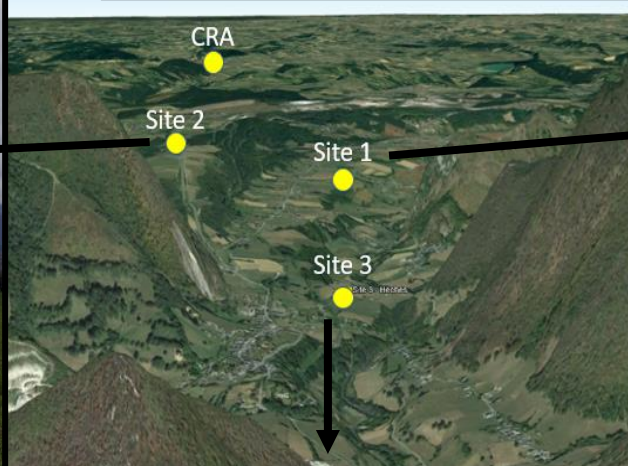
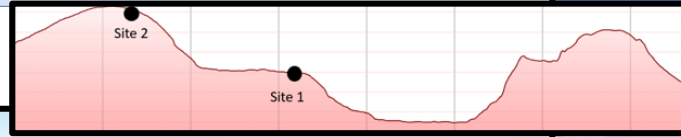
1. Introduction and experimental plan

Site v1 ("SEB station in the middle")



Site v2

"the most exposed and at higher altitude one"
"at the border of the valley"



Site v3

"the valley exit"

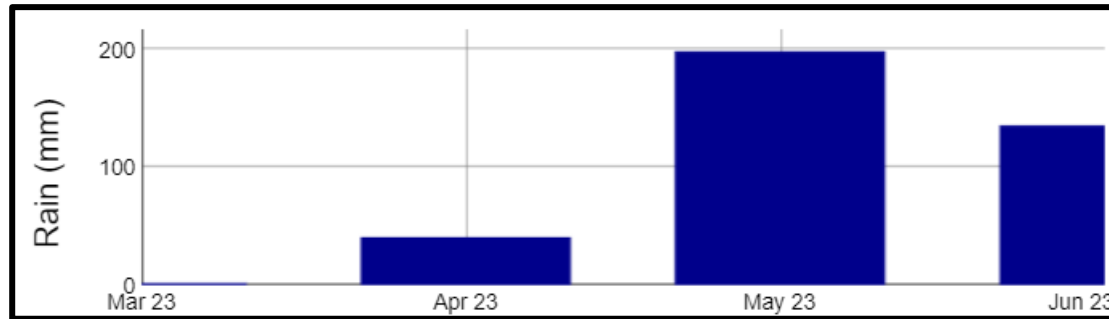


*v1 – Full SEB station
v2 – Remote AWS
v3 – Sonic anemometer*

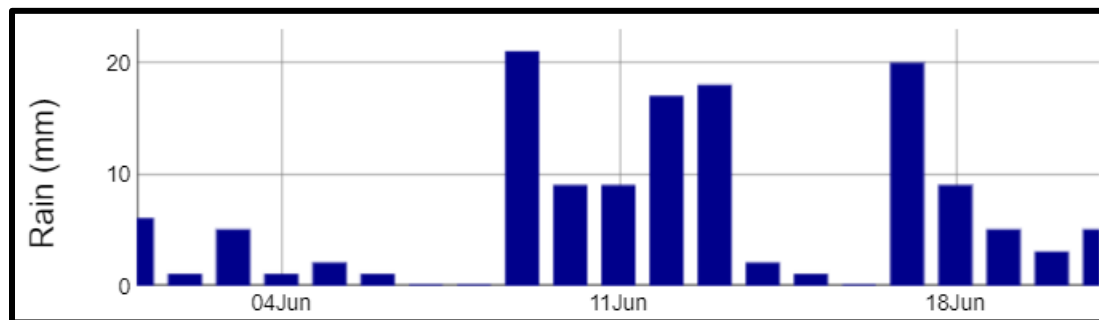
All photos looking to the valley (South)

2. Period overview (April – June)

A lot of rain...



374 mm (from 13/04 to 21/06)



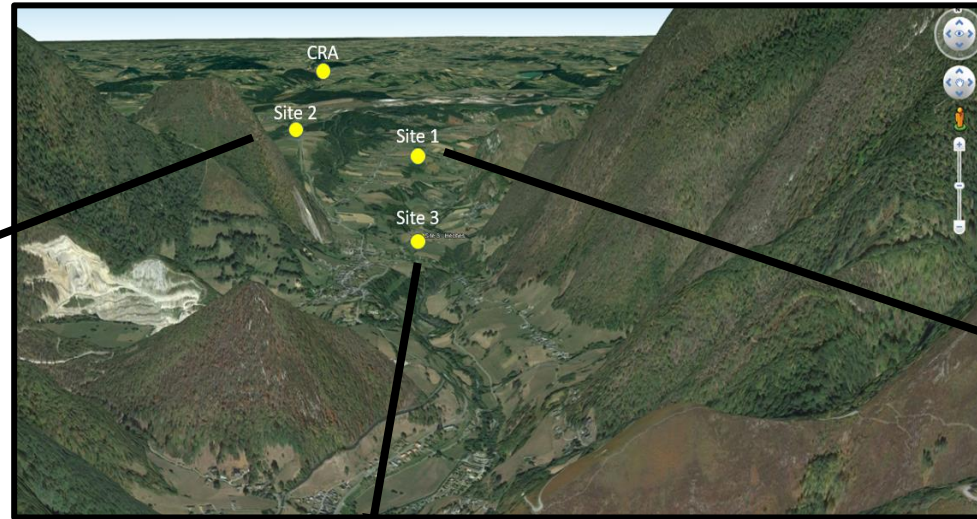
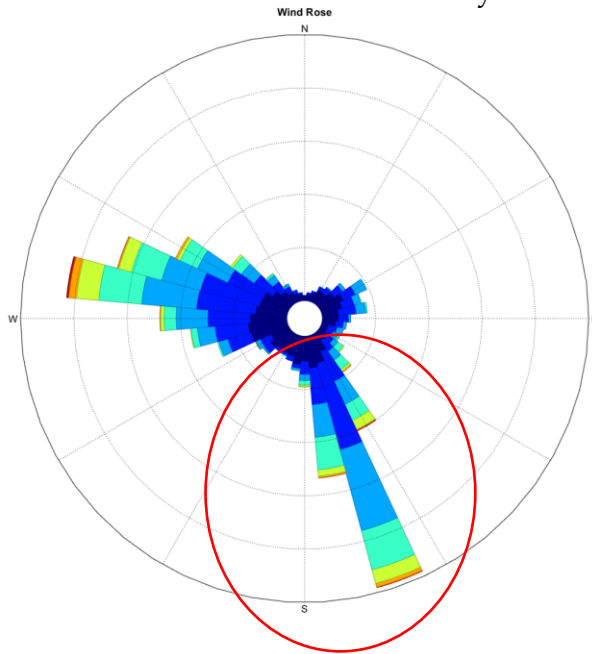
135 mm (in June)

2. Period overview (April – June)

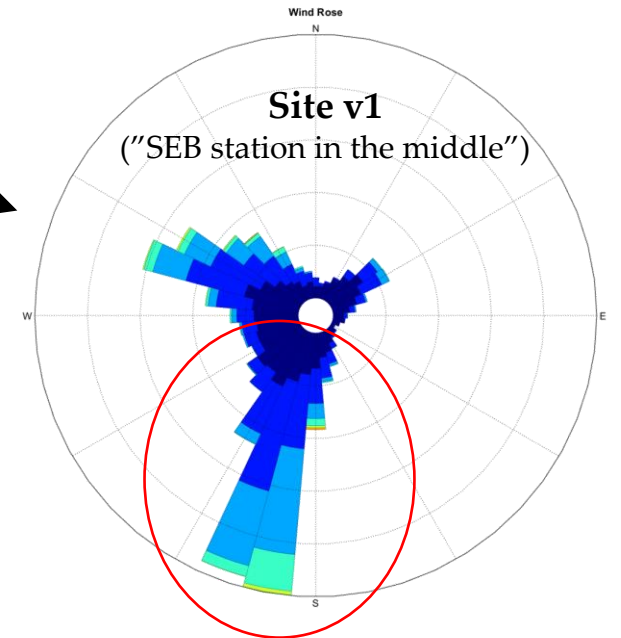
Westerlies, storms, and... **MOUNTAIN BREEZES!!!**

Site v2

“the most exposed and at higher altitude one”
“at the border of the valley”

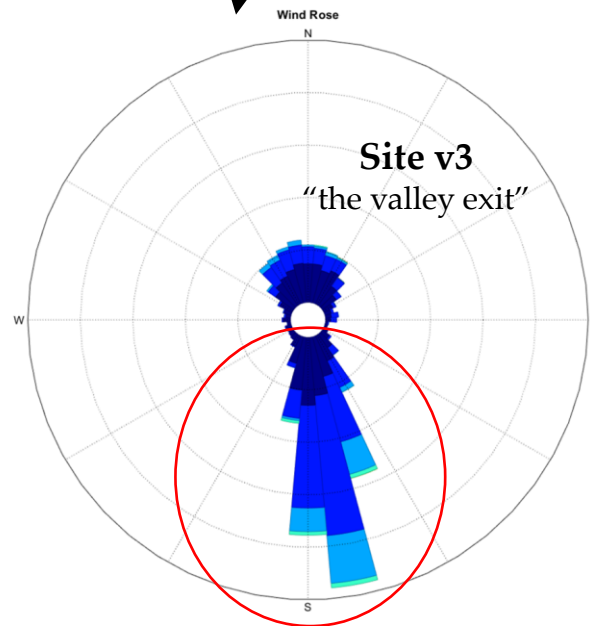


Site v1 ("SEB station in the middle")



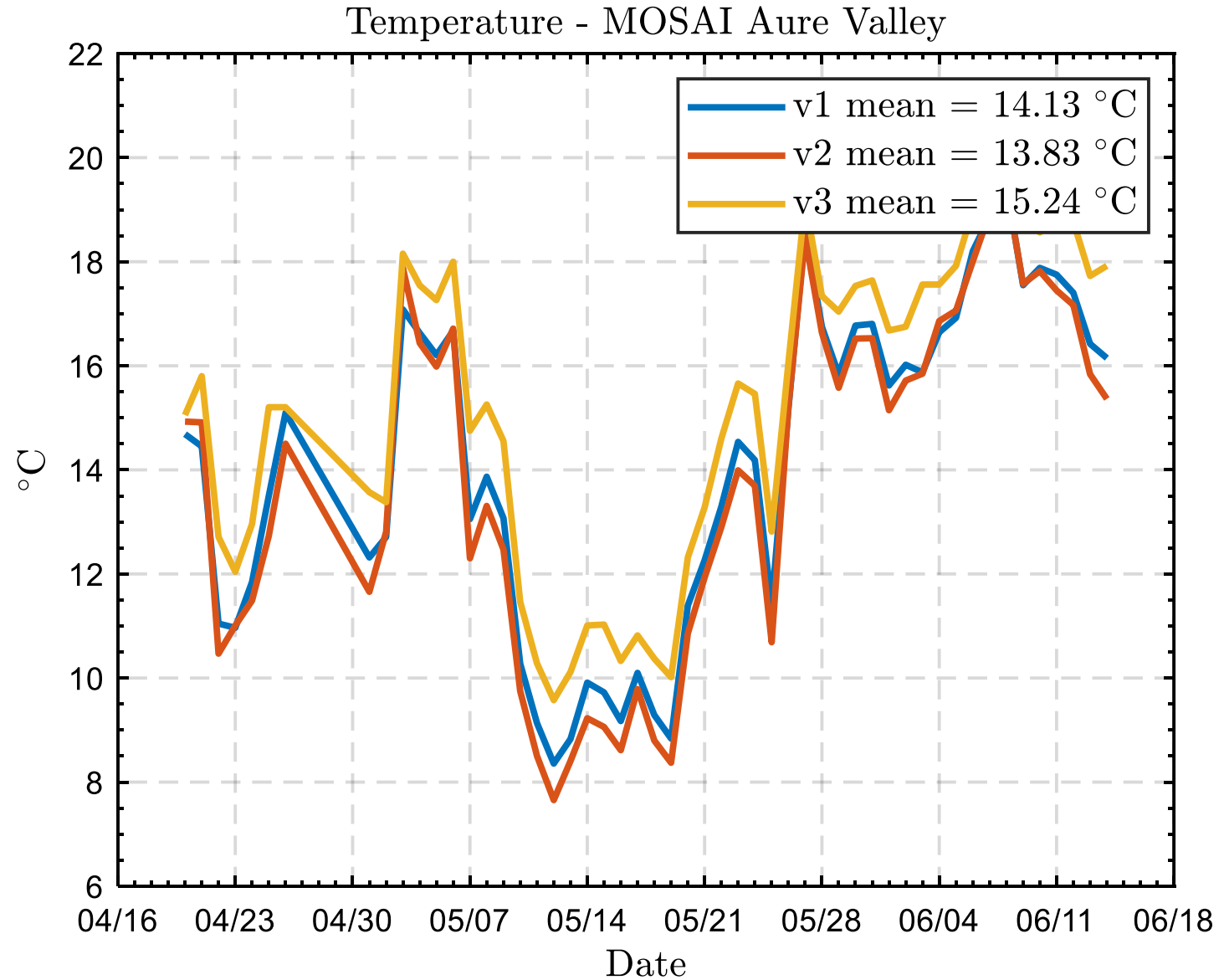
Site v3

“the valley exit”



2. Period overview (April – June)

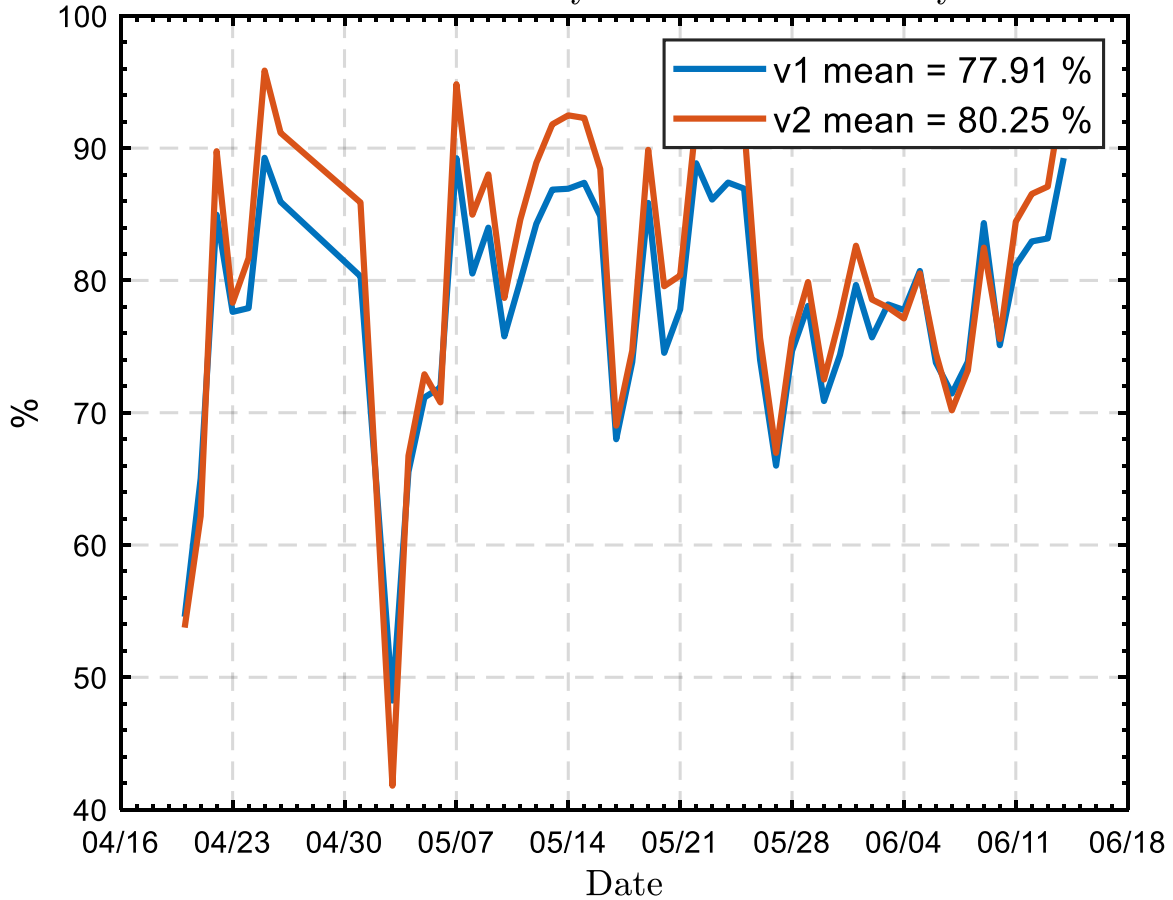
Temperature (daily mean)



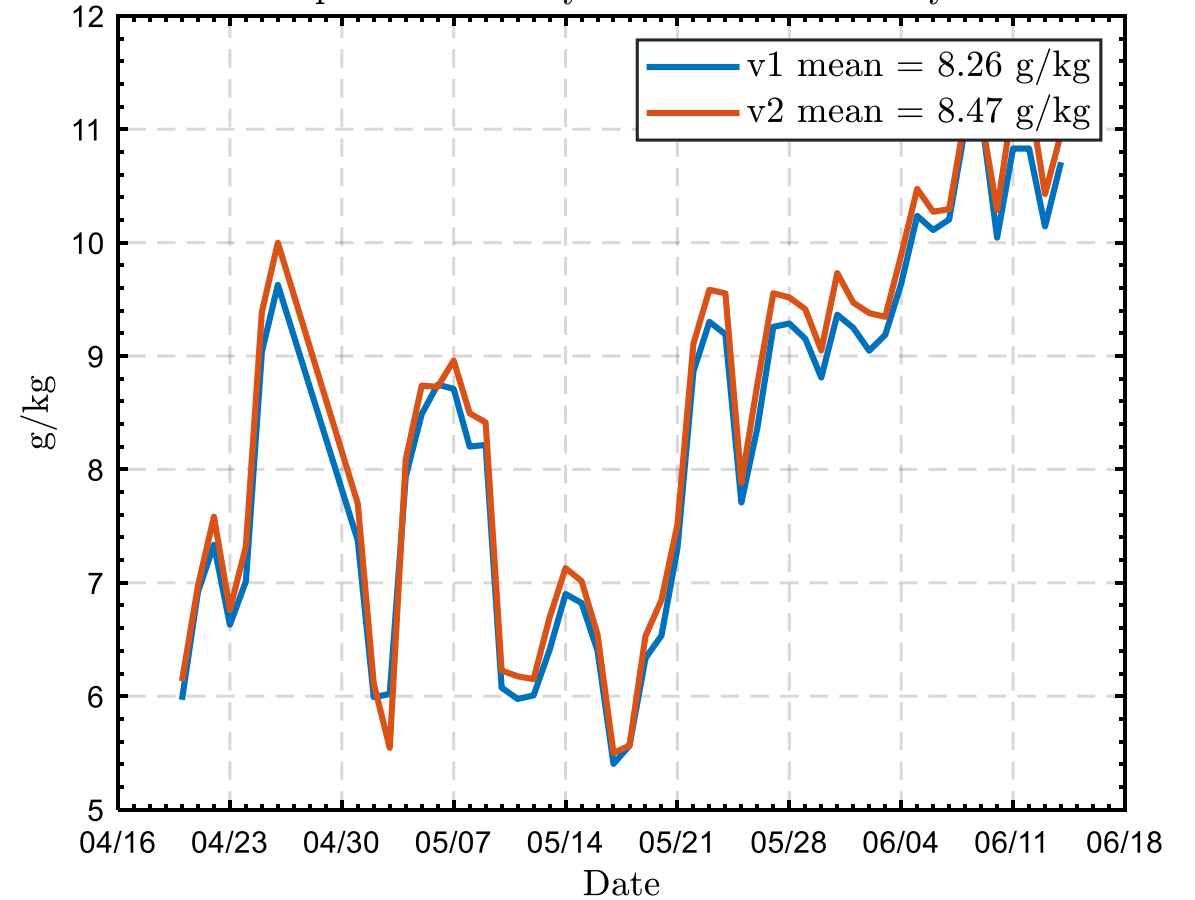
2. Period overview (April – June)

Relative humidity & Specific Humidity (daily mean)

Relative Humidity - MOSAI Aure Valley

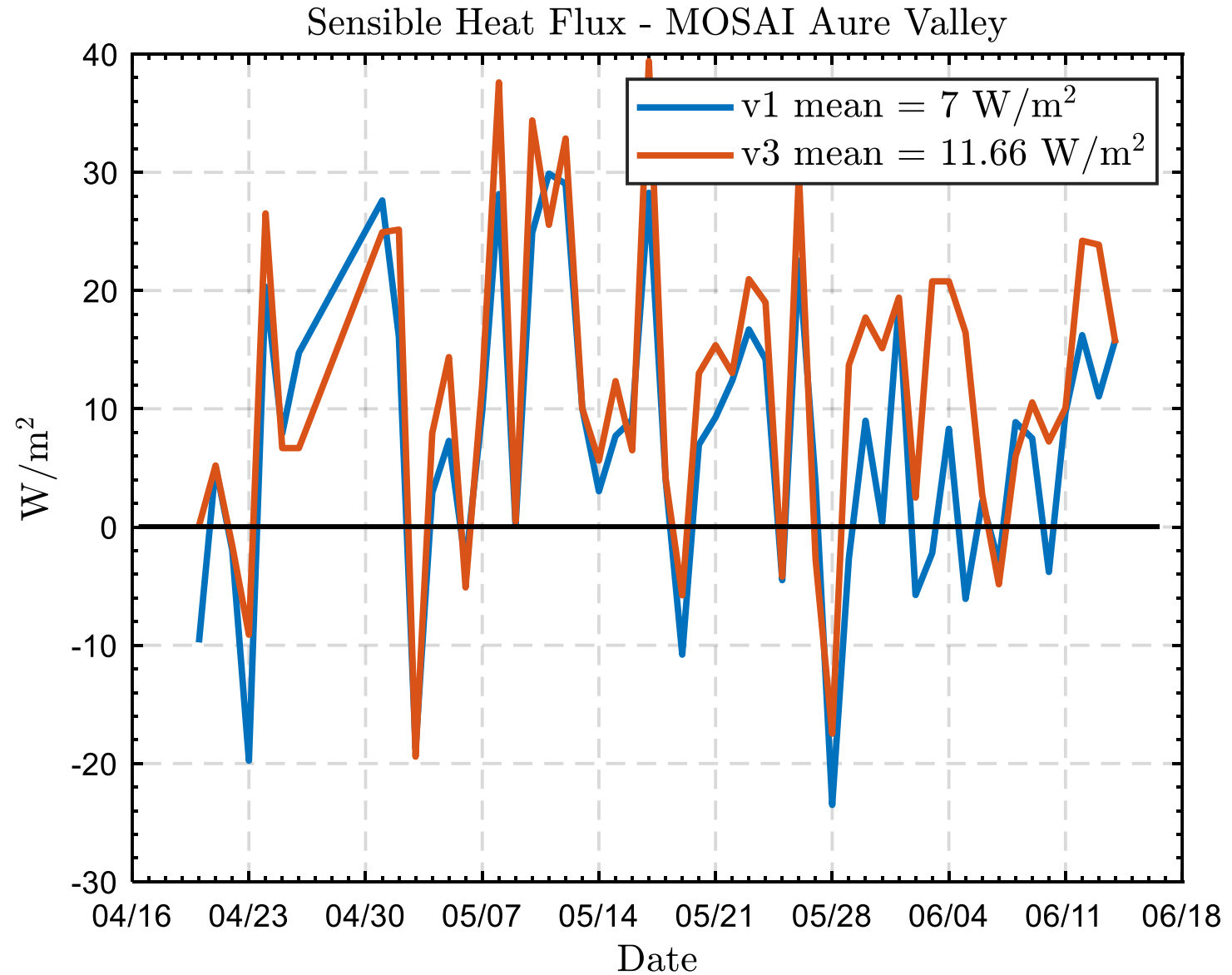


Specific Humidity - MOSAI Aure Valley



2. Period overview (April – June)

Sensible Heat Flux



3. Sites comparison

**Prototypical
breeze day**

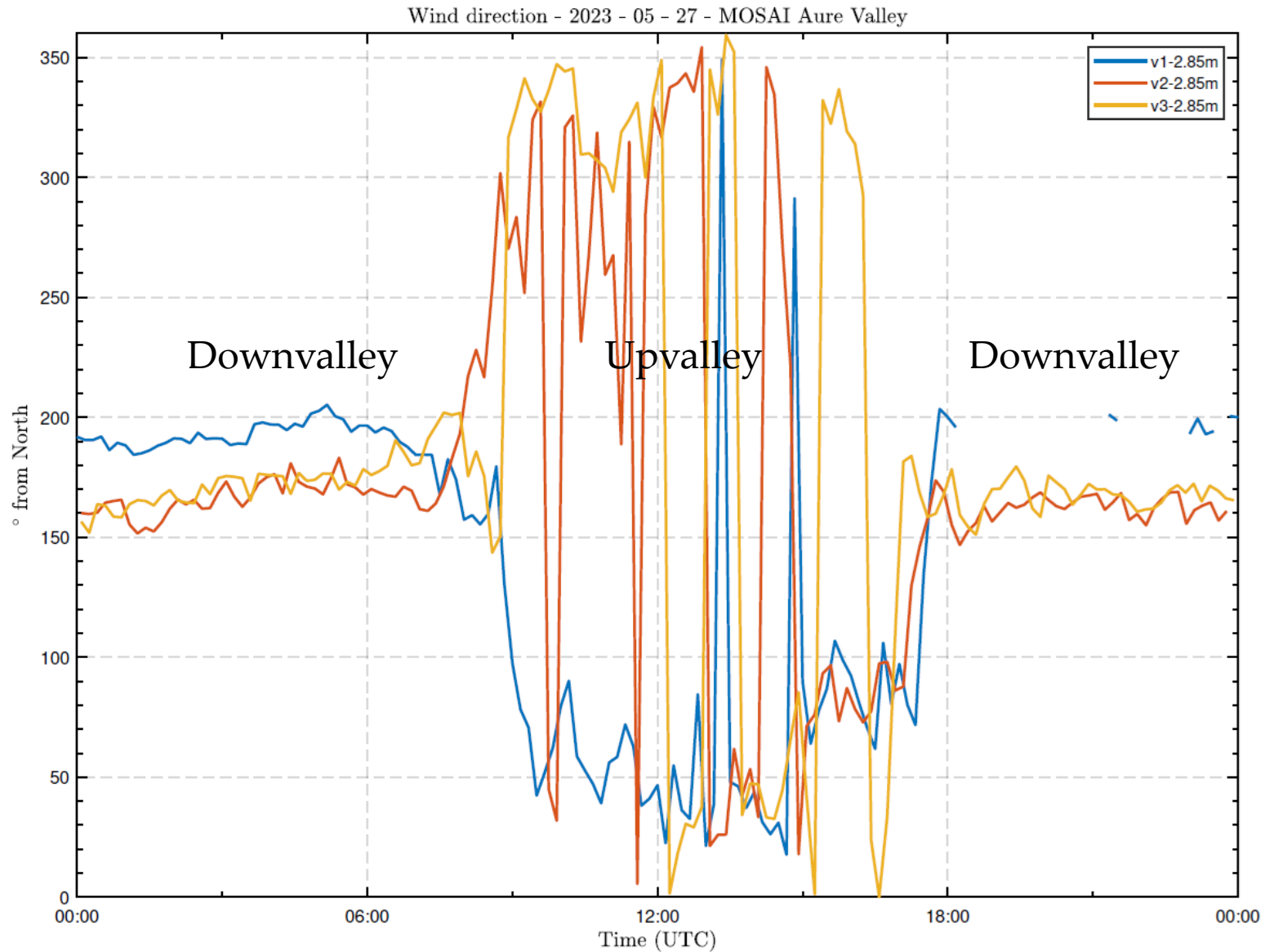
27/05/2023

3. Sites comparison

27/05/2023

Prototypical
breeze day

Wind direction

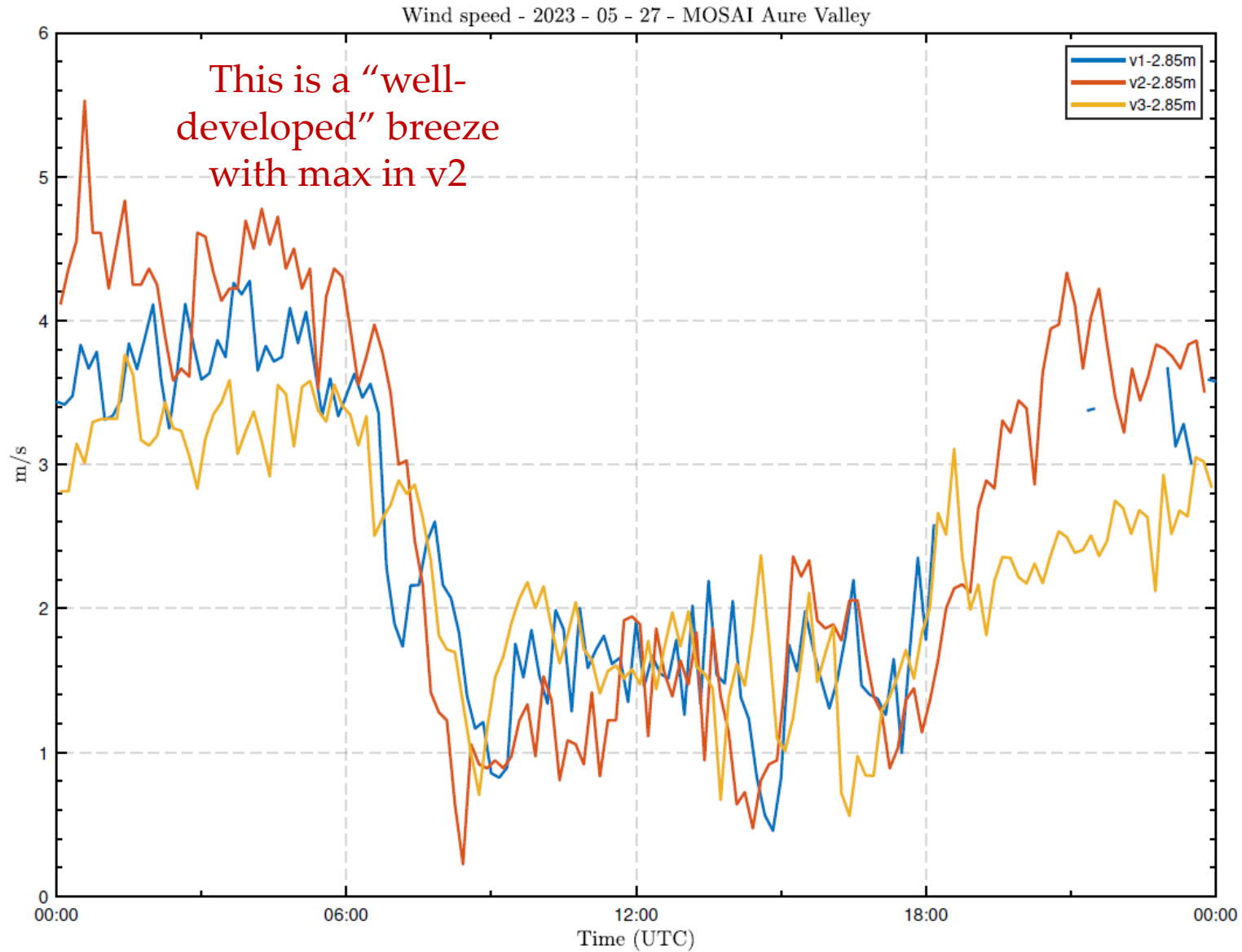


3. Sites comparison

27/05/2023

Prototypical
breeze day

Wind speed



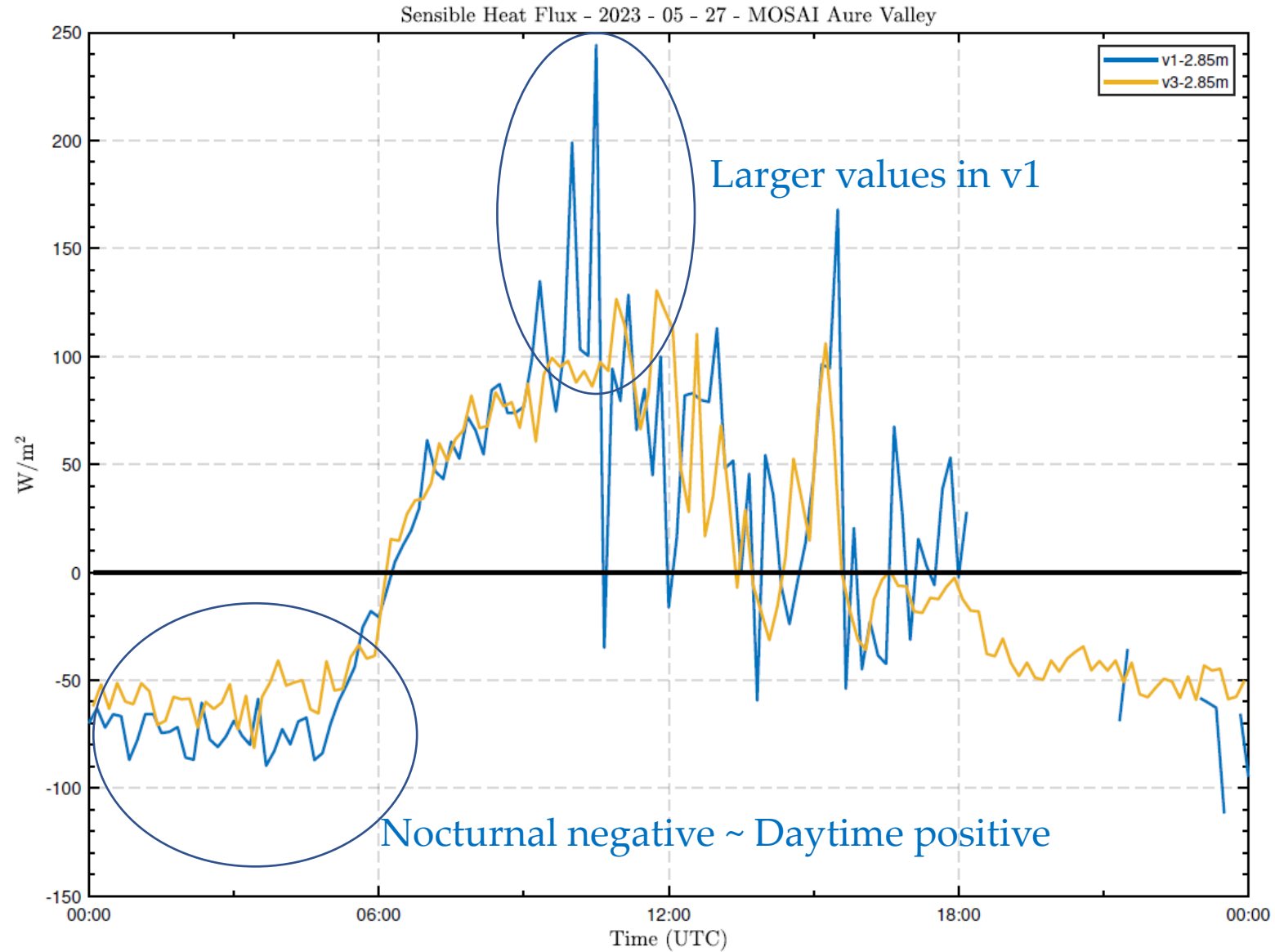
Contrary to typical
wind speed signature
in most "flat sites far
from mountains"!

3. Sites comparison

27/05/2023

Prototypical
breeze day

SH

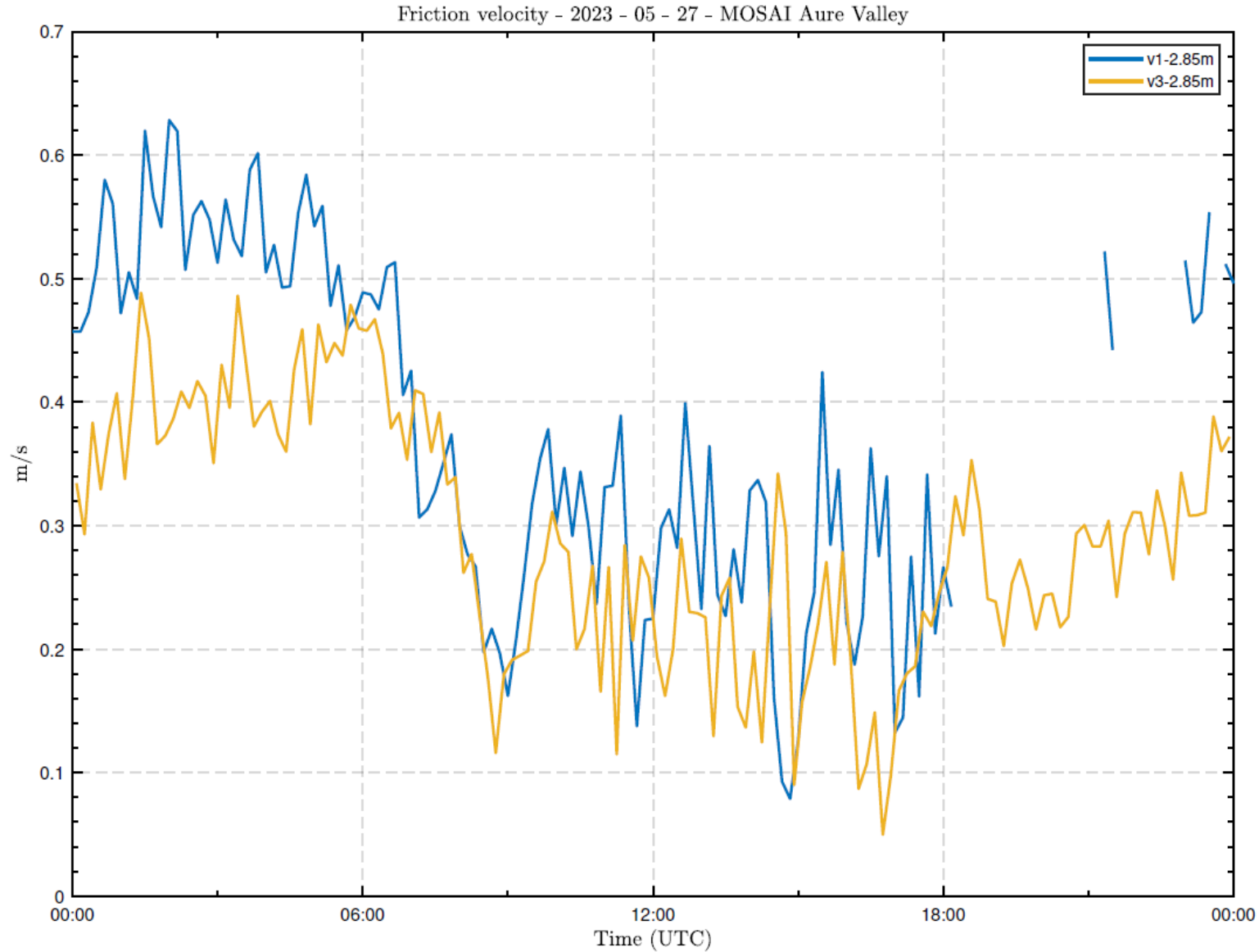


3. Sites comparison

27/05/2023

Prototypical
breeze day

Friction velocity



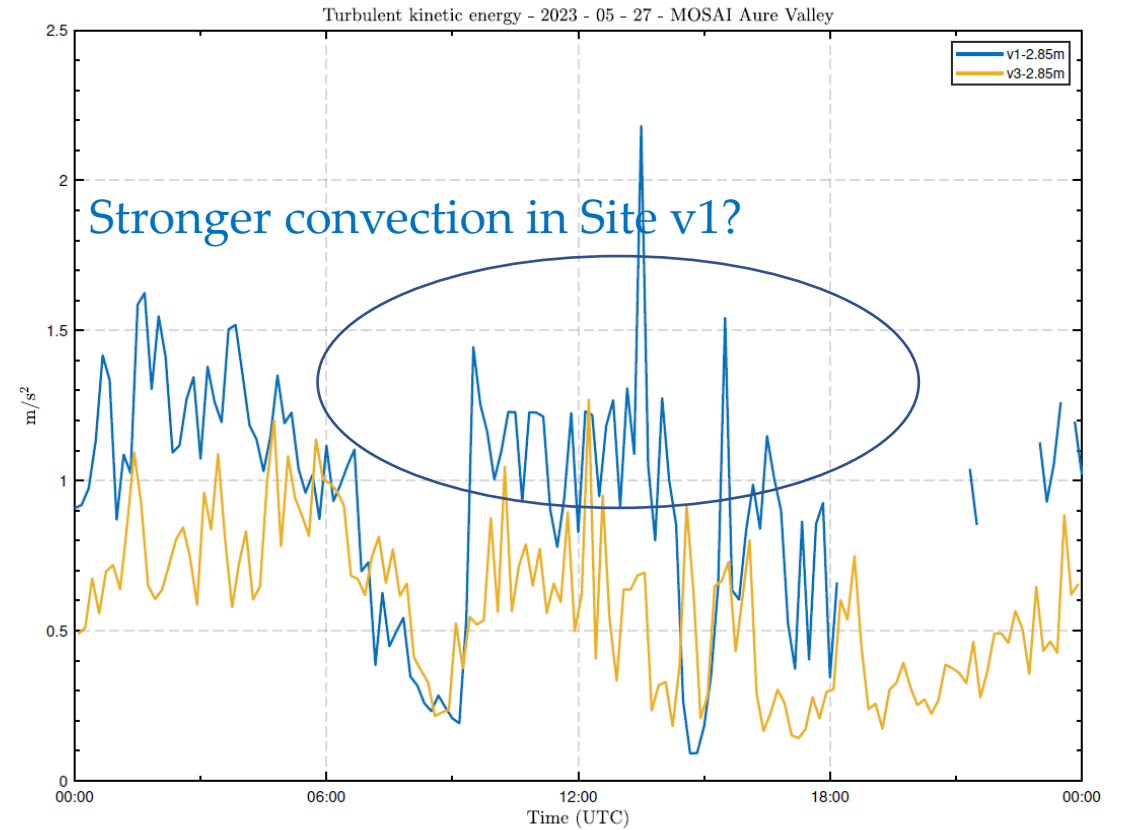
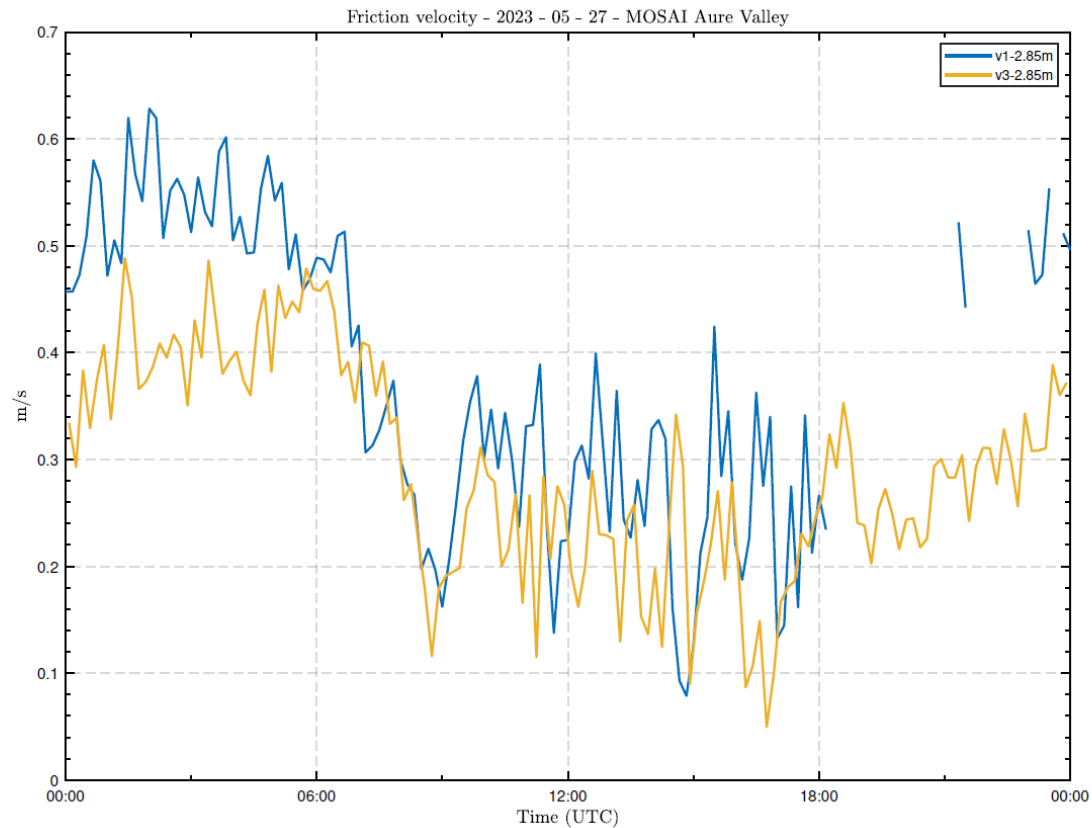
Contrary to typical
turbulence signature in
most "flat sites far
from mountains"!

3. Sites comparison

27/05/2023

Prototypical
breeze day

u^* & TKE



3. Sites comparison

Less typical breeze day

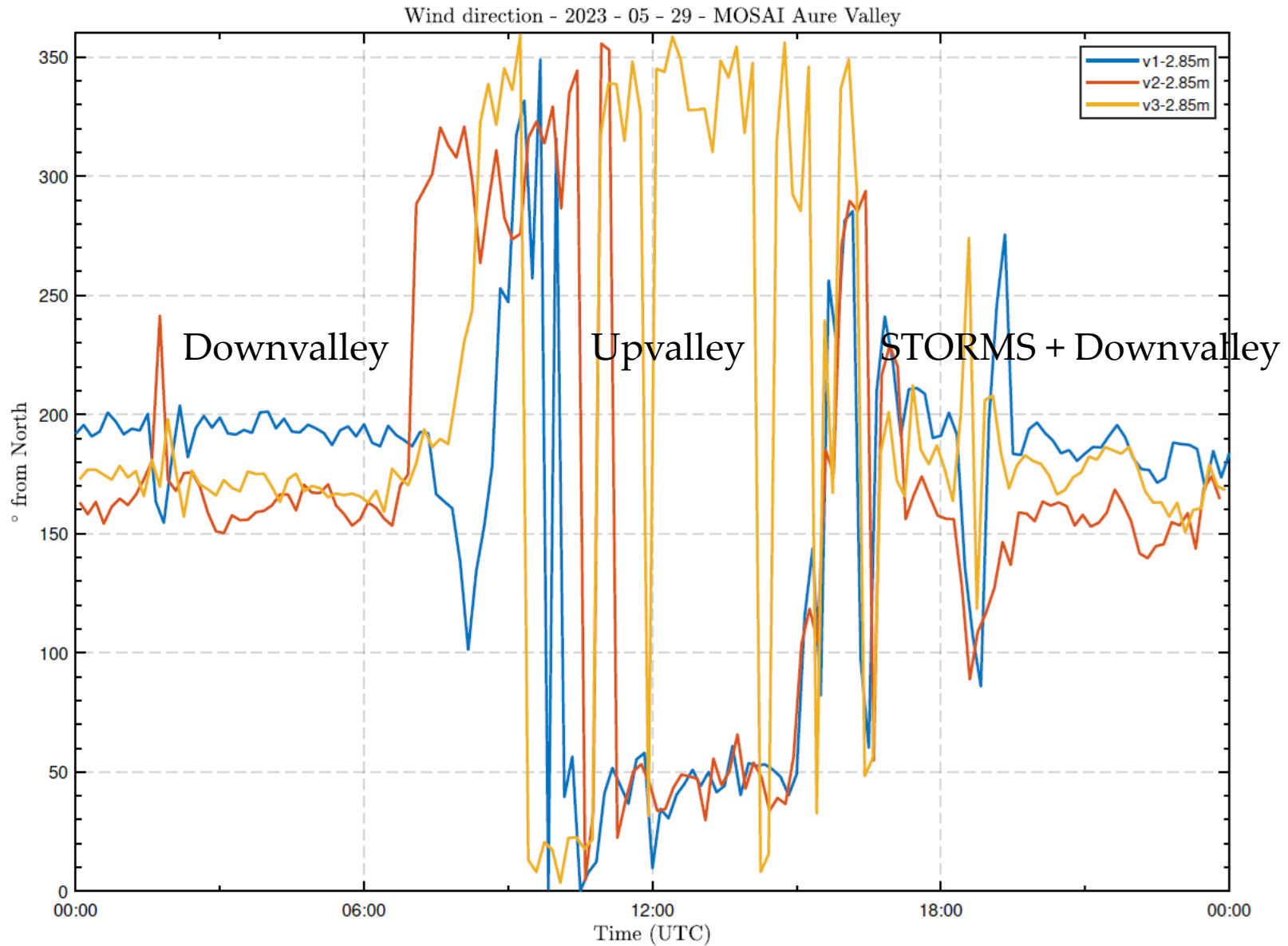
**(with storms and
probably shallower down-valley flow)**

3. Sites comparison

29/05/2023

Stormy-breeze
day

Wind direction

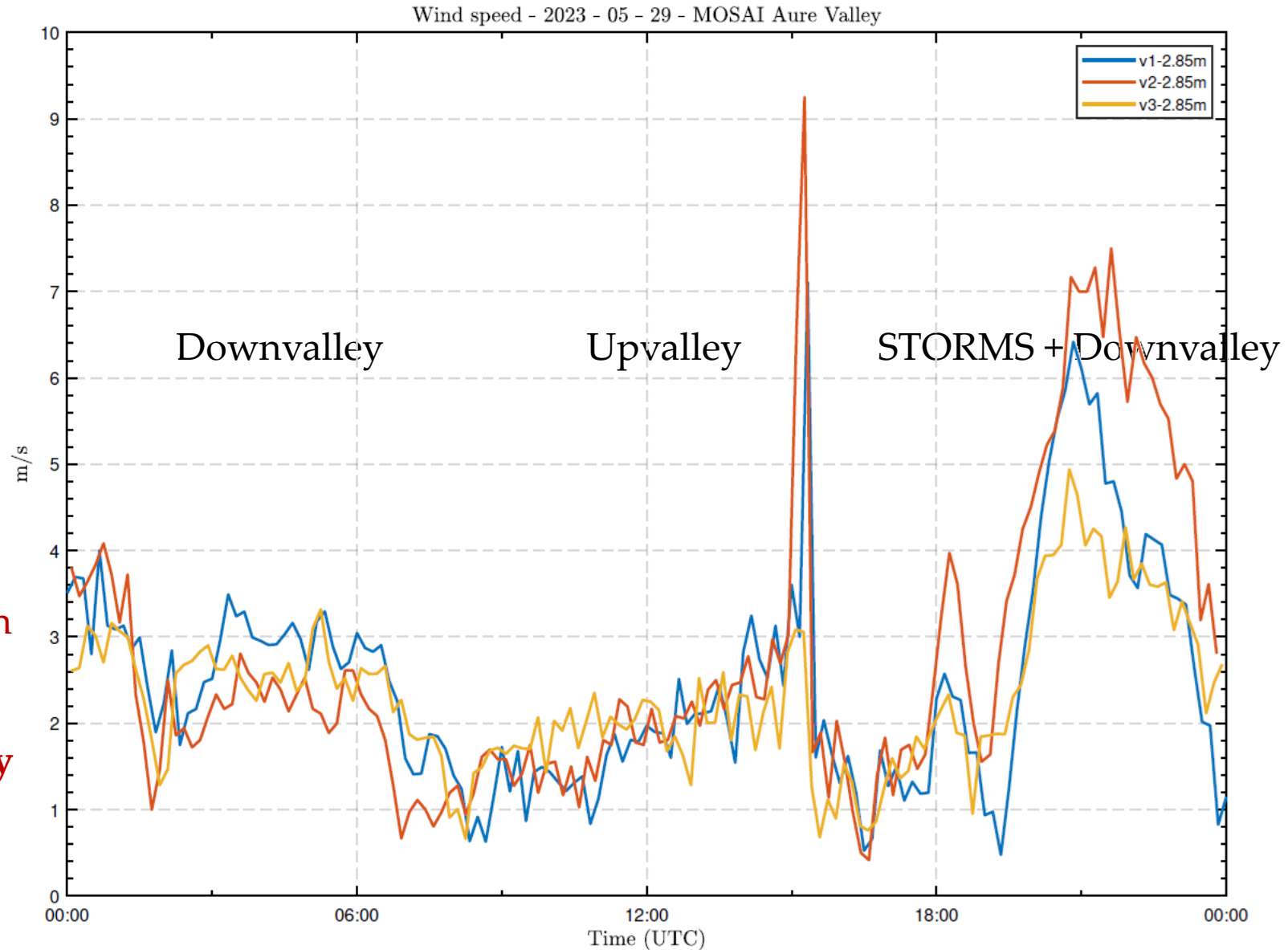


3. Sites comparison

29/05/2023

Stormy-breeze day

Wind speed

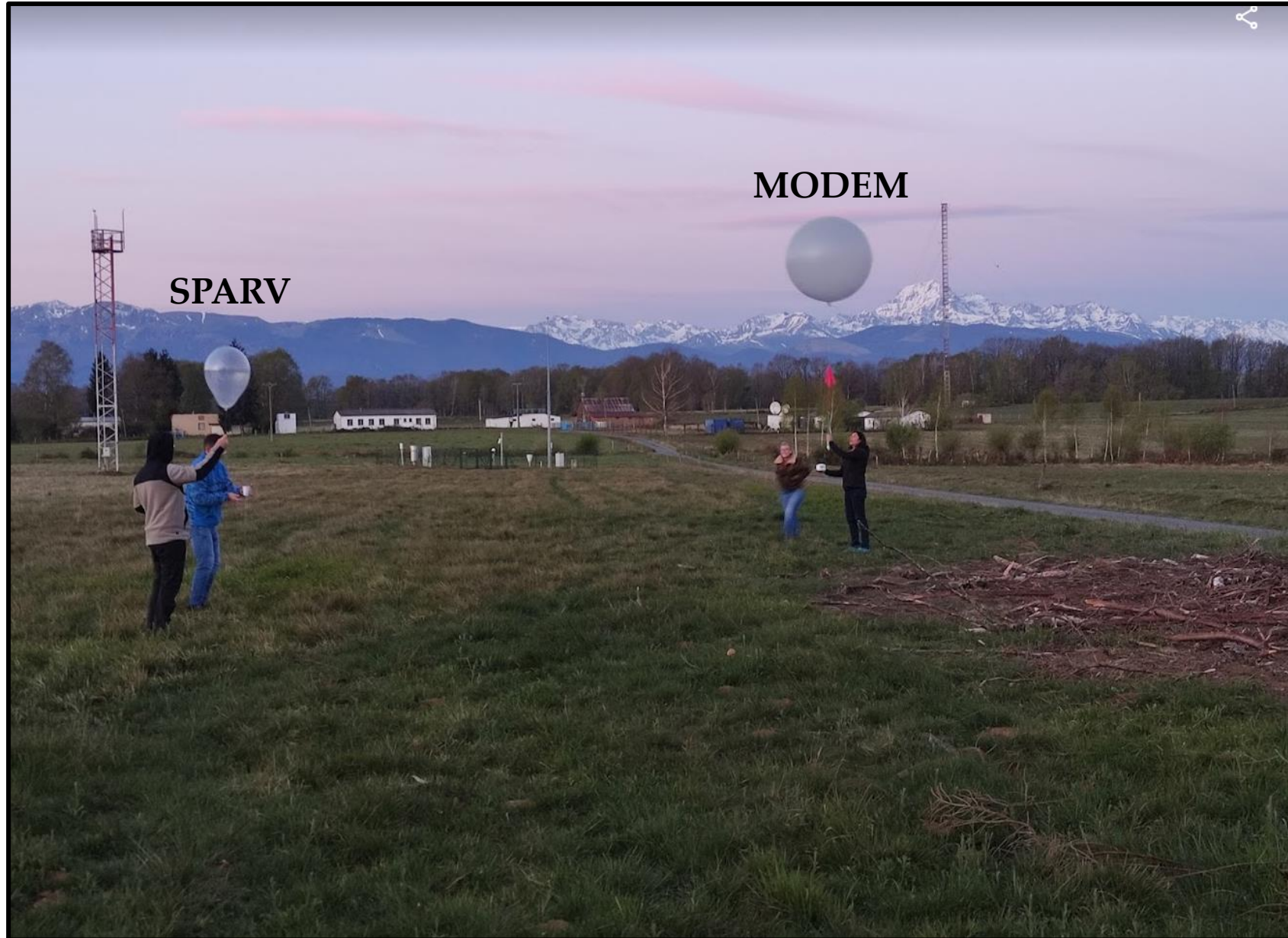


This is a “less-developed” breeze with min in v2

Shallower down-valley flow?

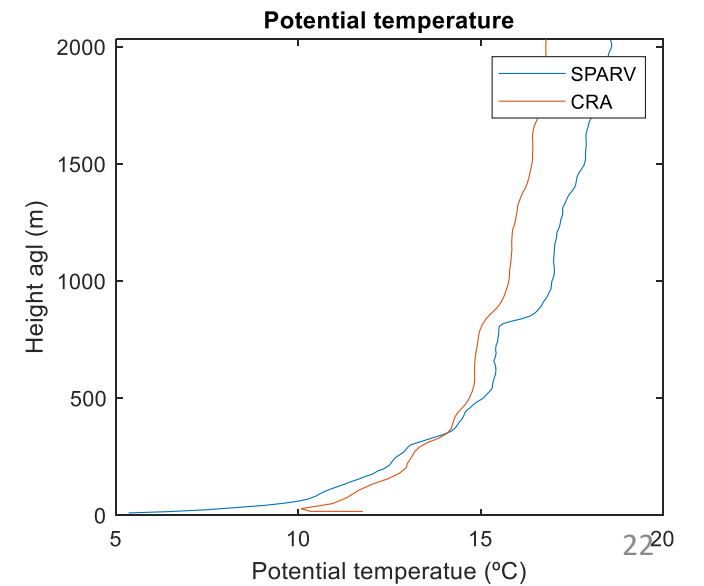
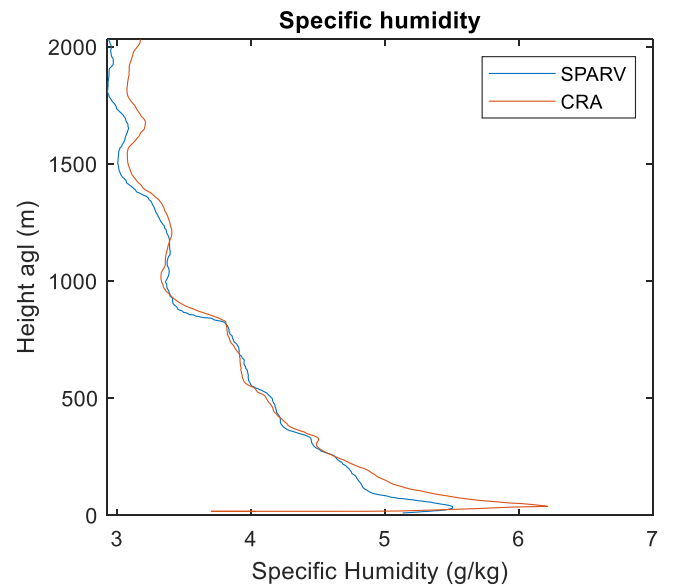
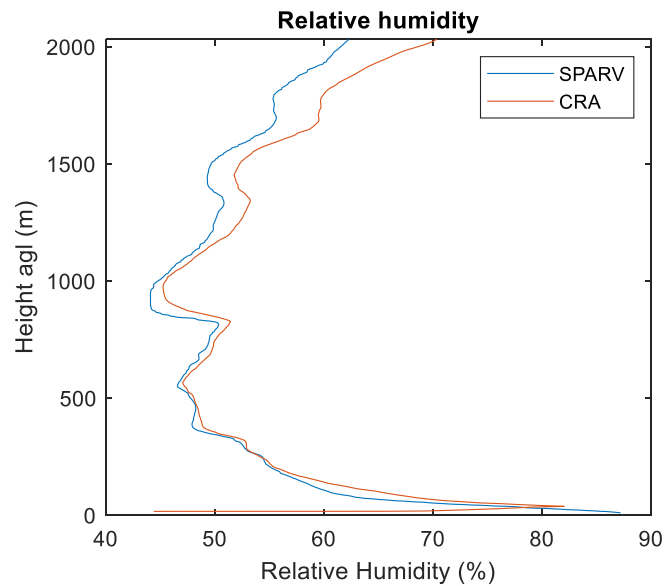
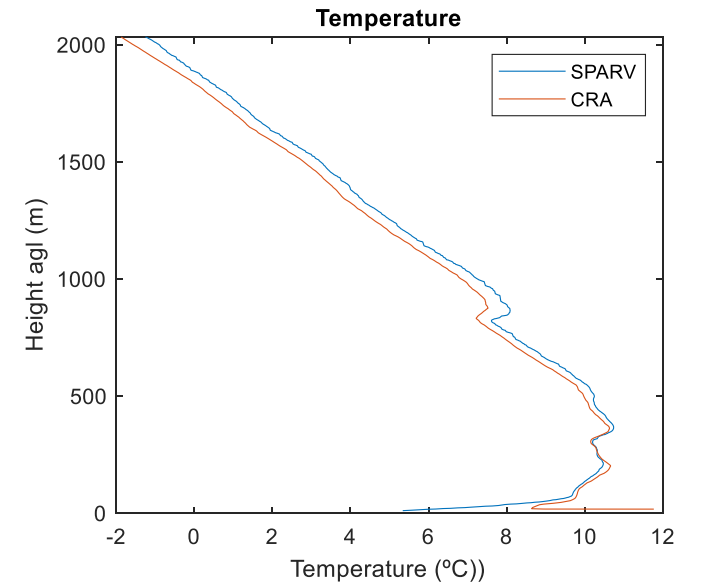
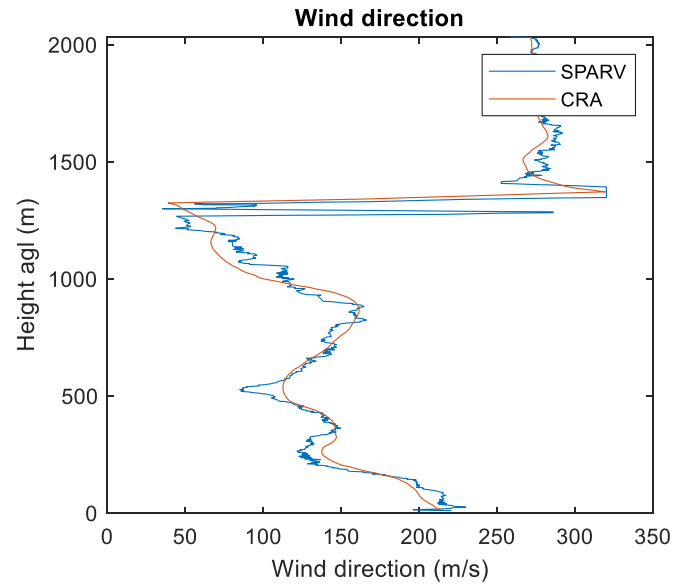
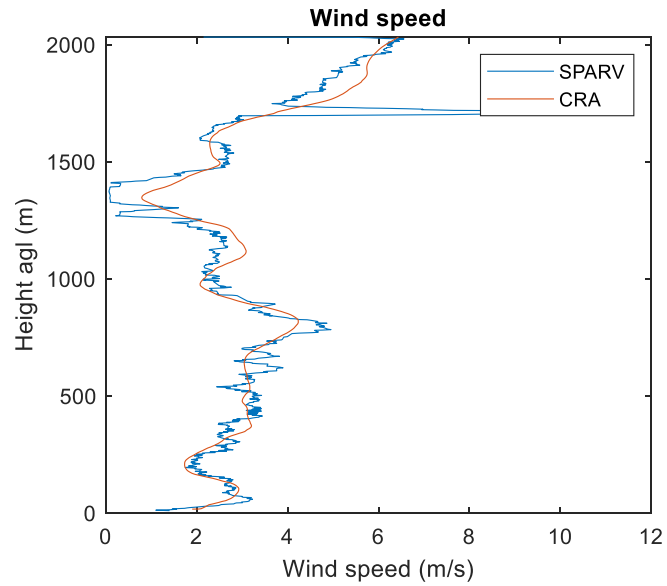
4. SPARV – MODEM radiosounding comparison

CRA
19 April 2023
07:00 LT



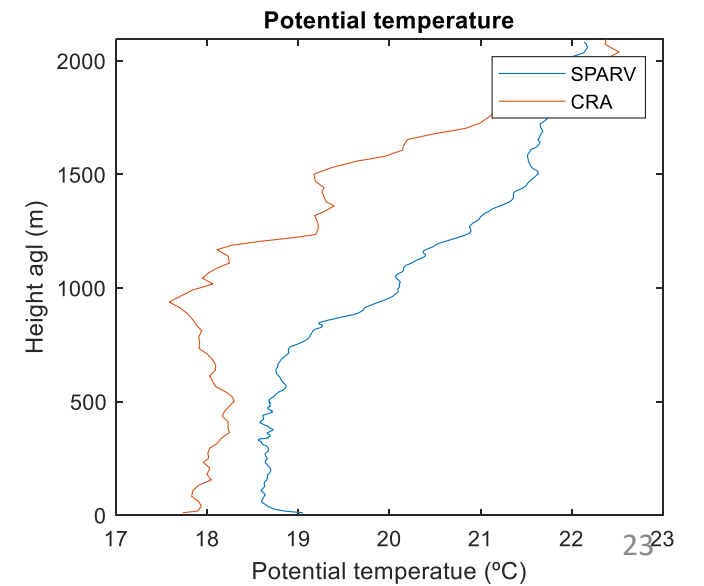
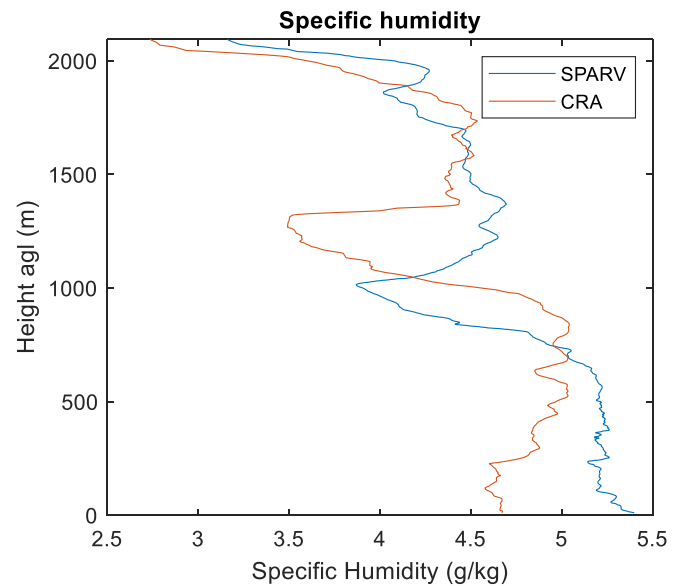
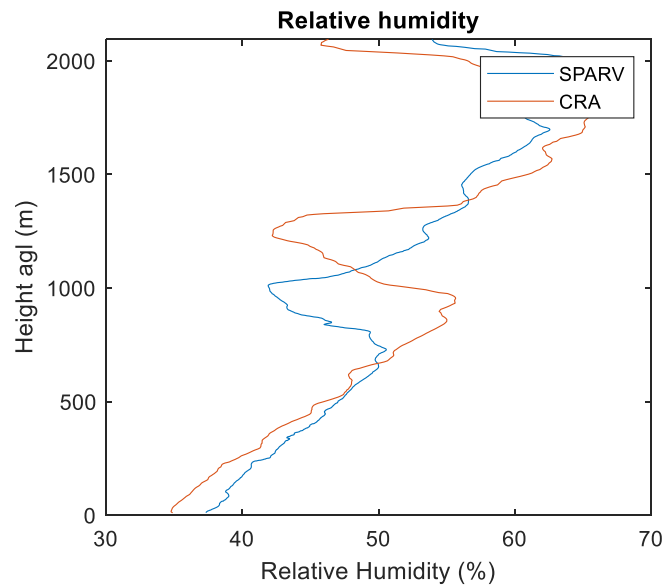
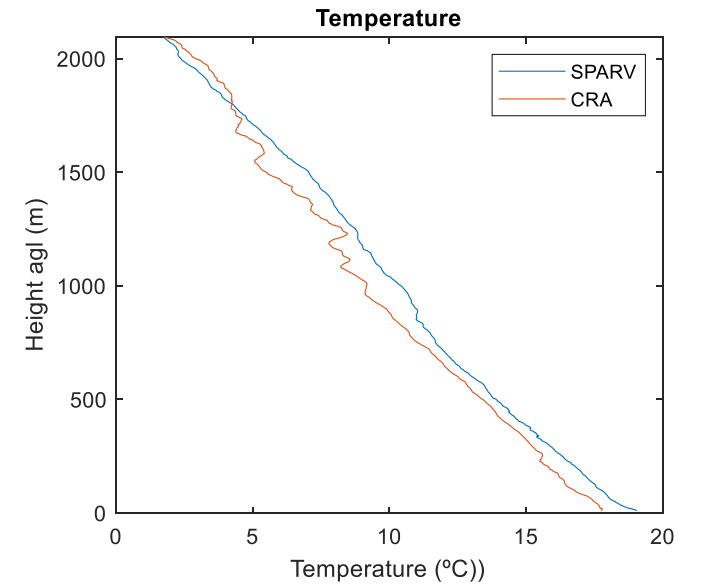
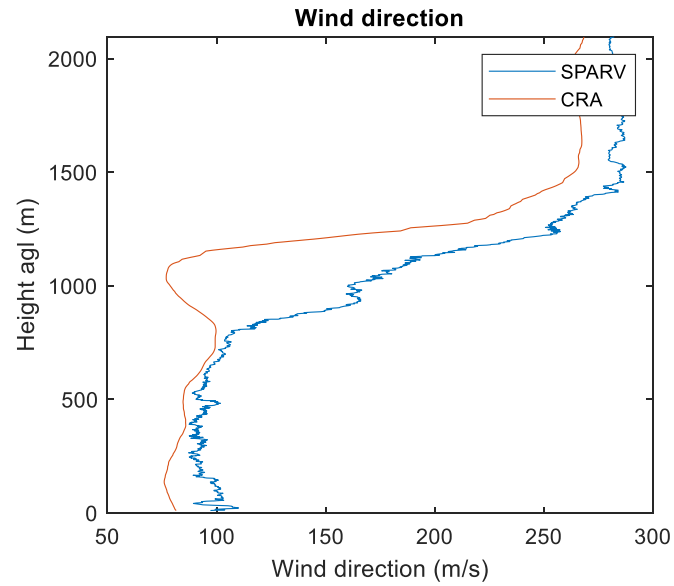
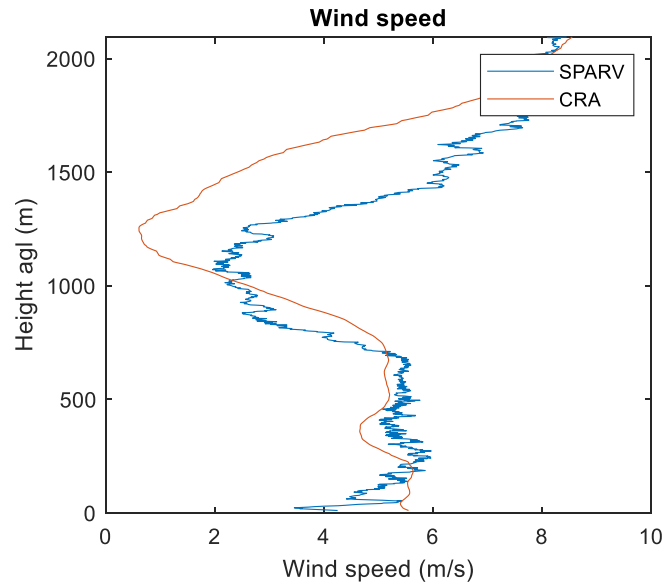
4. SPARV – MODEM radiosounding comparison

07:00 LT



4. SPARV – MODEM radiosounding comparison

19:00 LT



5. Experimental plan for SOP2 - August



Focus on
radiosounding
launching

(nocturnal?)

(2 sites?)

Some conclusions

- **Many interesting events**
(more than 20 events in 2 months, despite the rain)
(more events in site v3)

- Many interesting **local differences**

- These local differences seems to depend on the **jet structure**

- **SPARV RS work well**



GOOD motivation for RS in SOP2

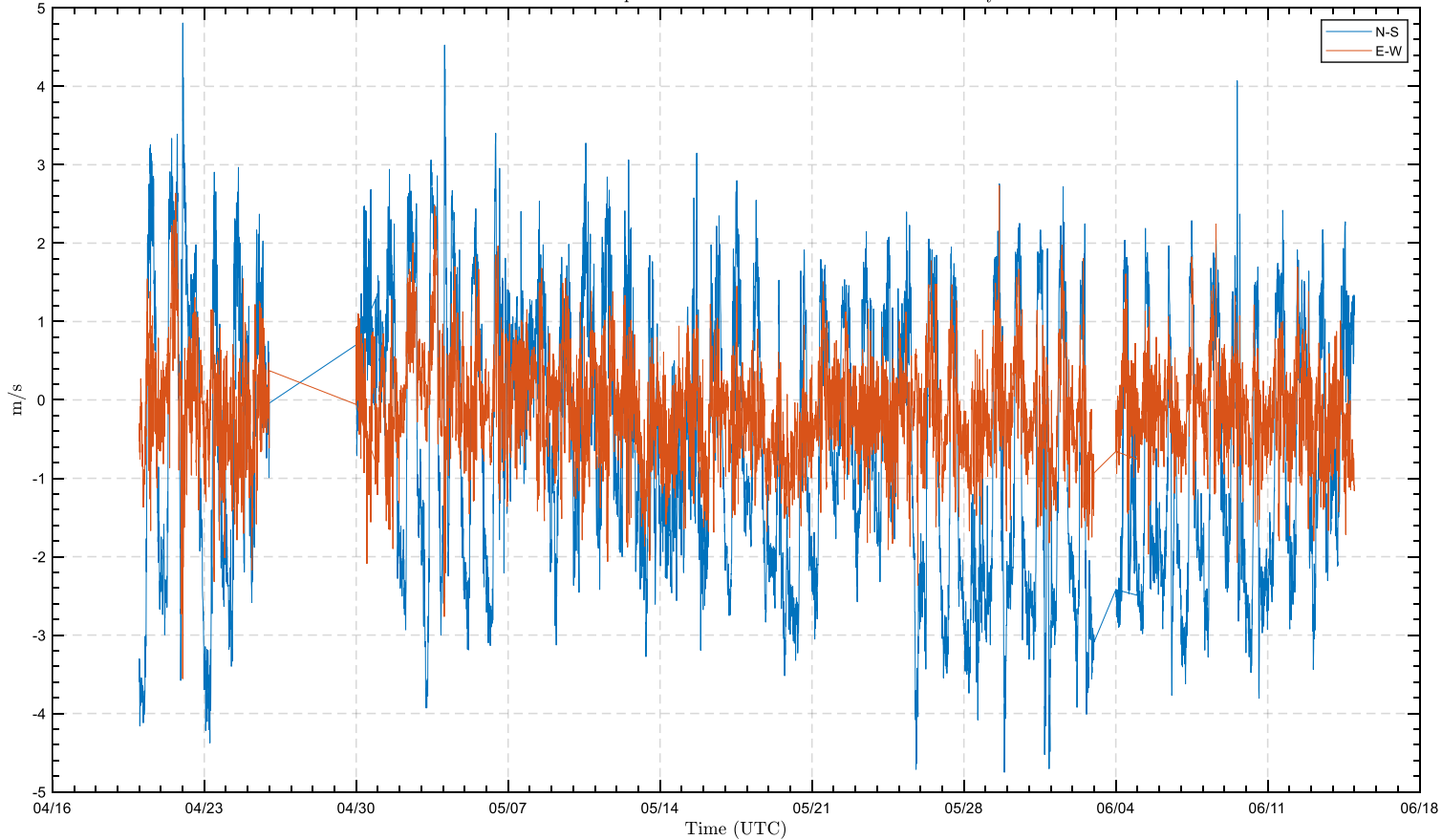
Thanks! See you in August!

**and
MANY THANKS TO THE CRA TEAM
for the maintenance and improvement of the stations!!**



2. Period overview (April – June)

N-S and E-W components - 2023 - 06 - 31 - MOSAI Aure Valley

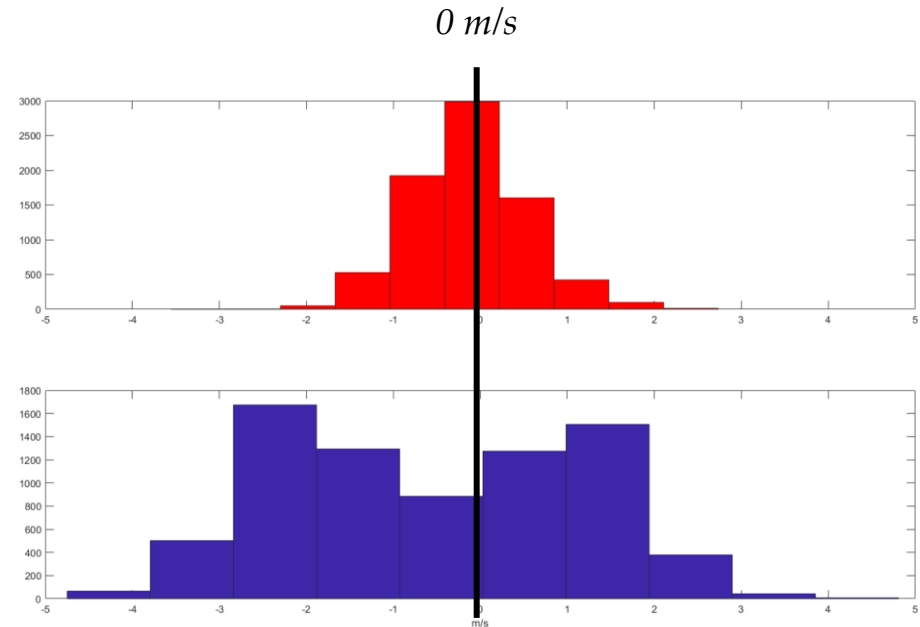


Just to check the WD at site v3

Wind horizontal components (site v3)

N-S (3 times stronger)

W-E



Winds at v3 are N-S, and especially with South component