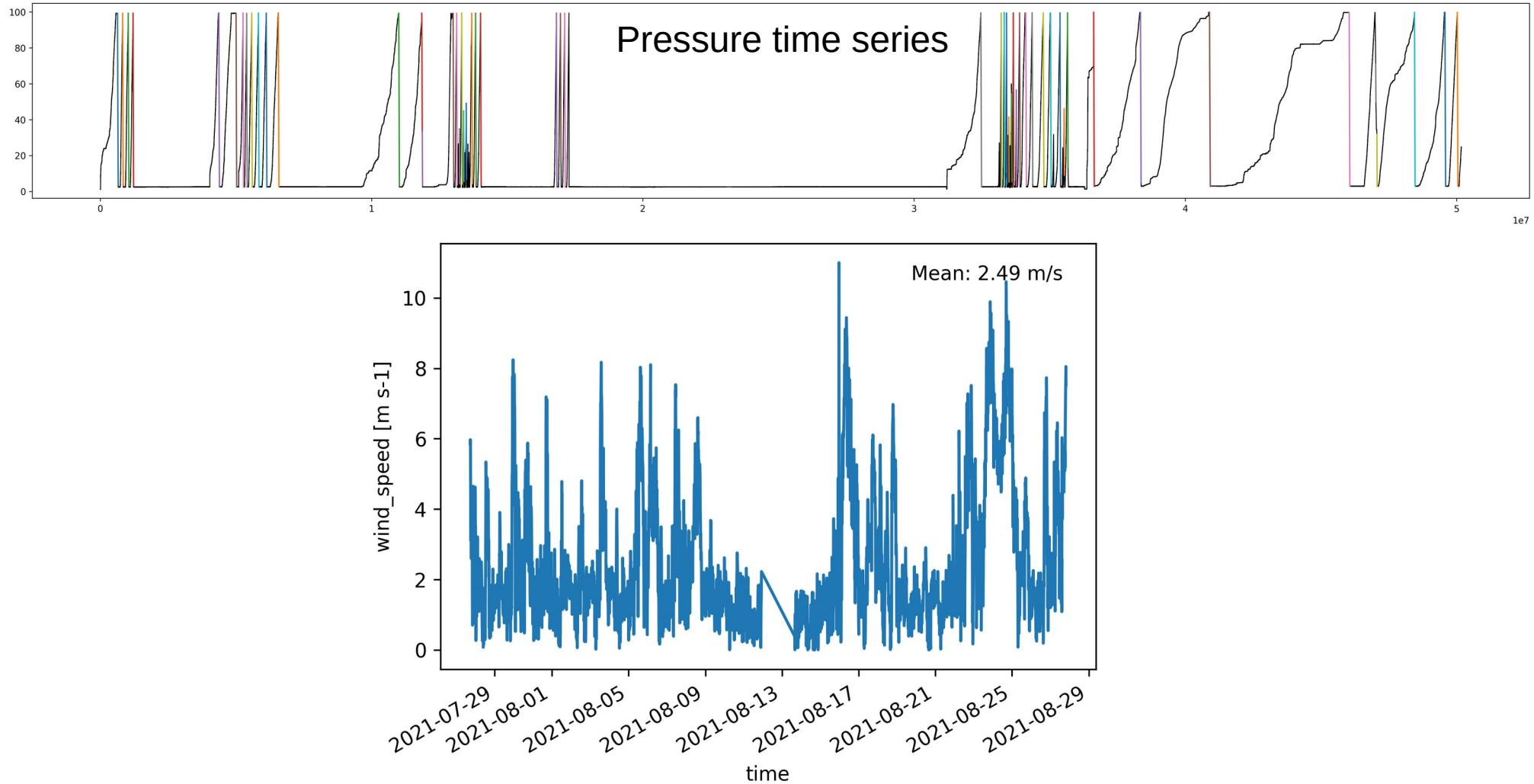
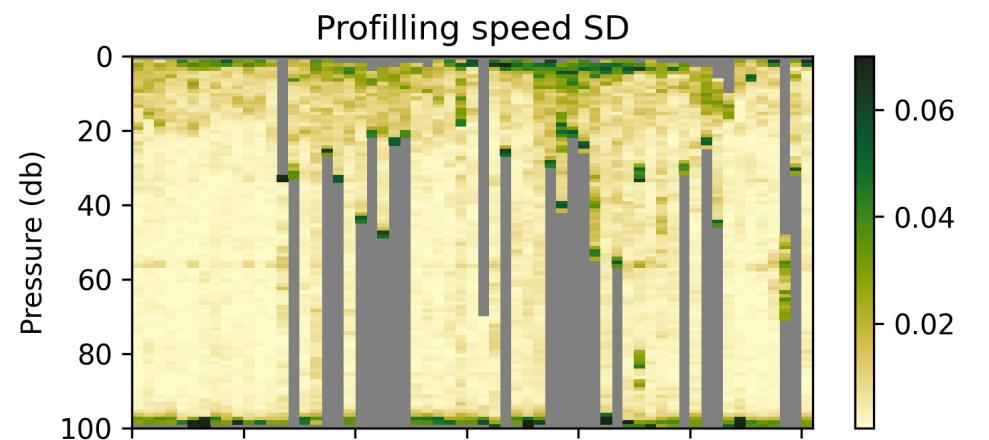
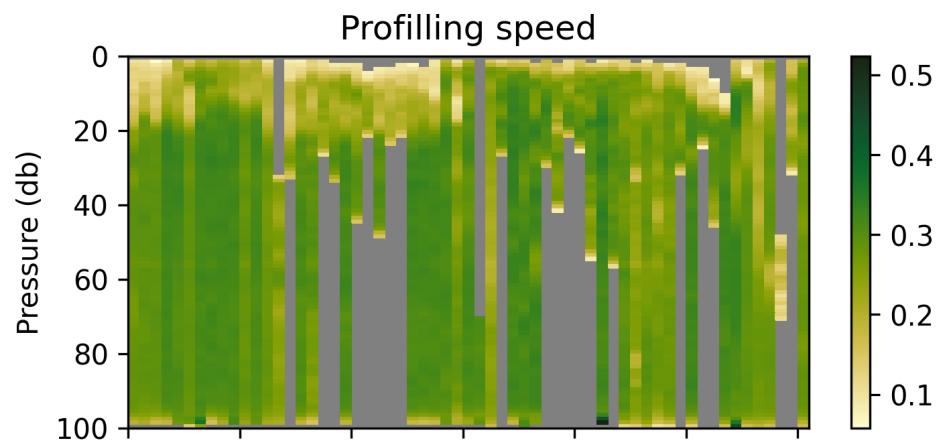
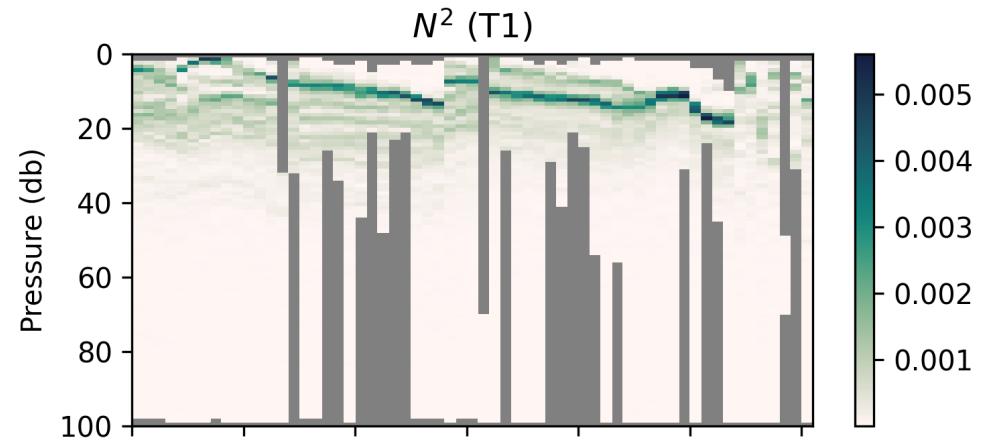
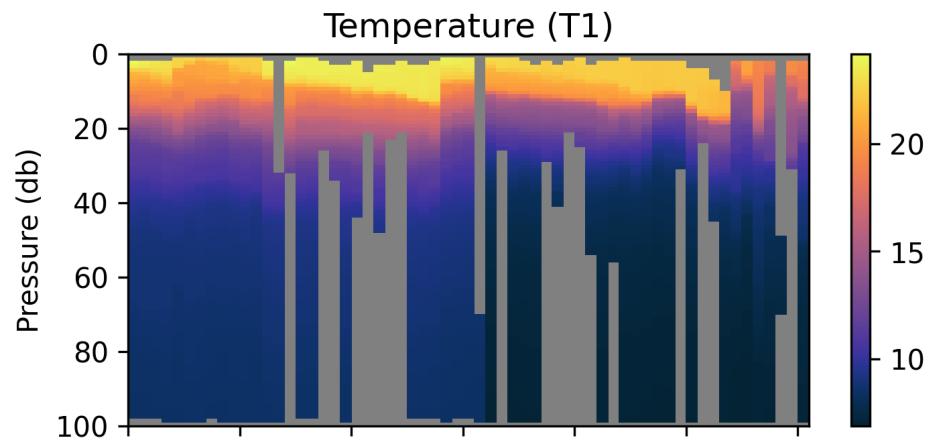
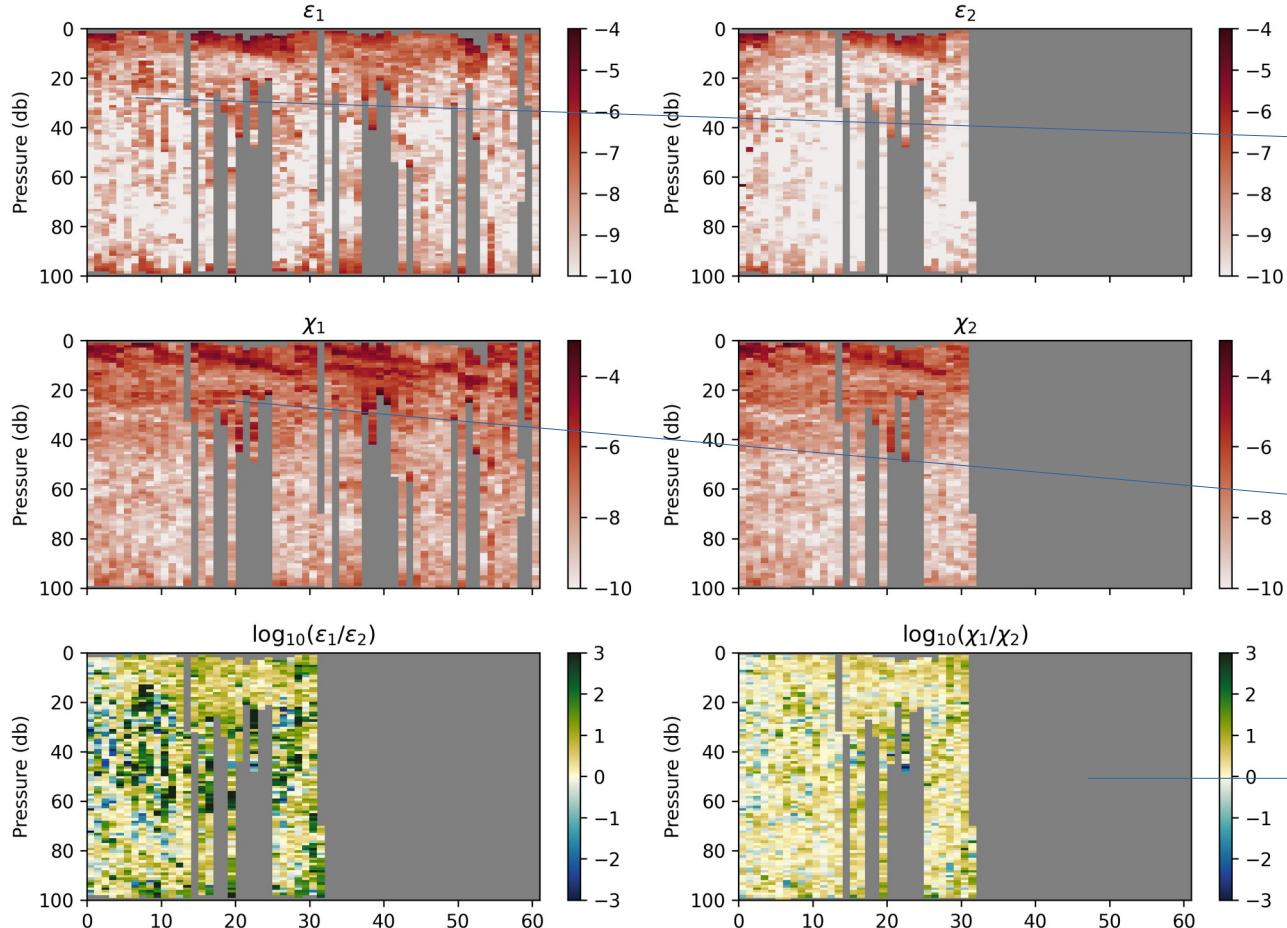


JULY 2021 DEPLOYMENT



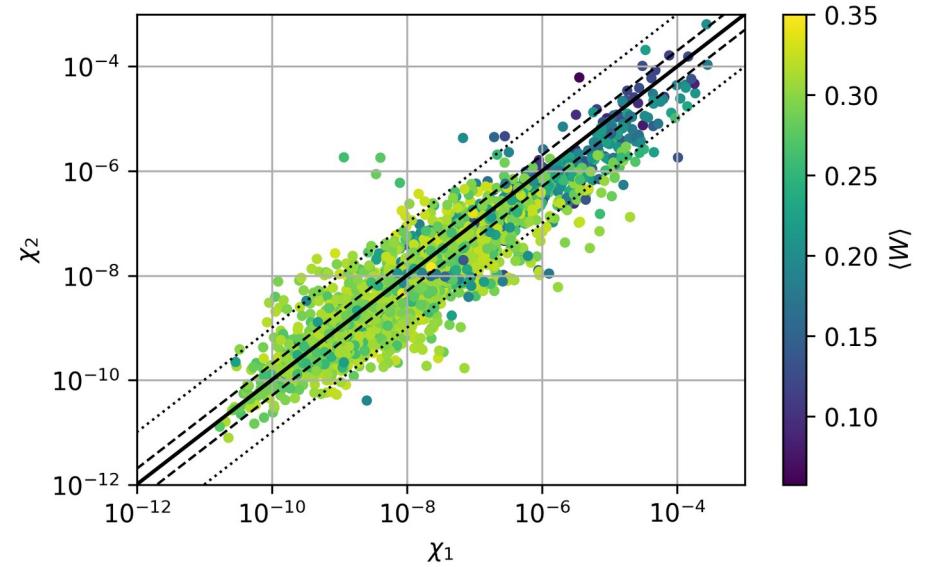
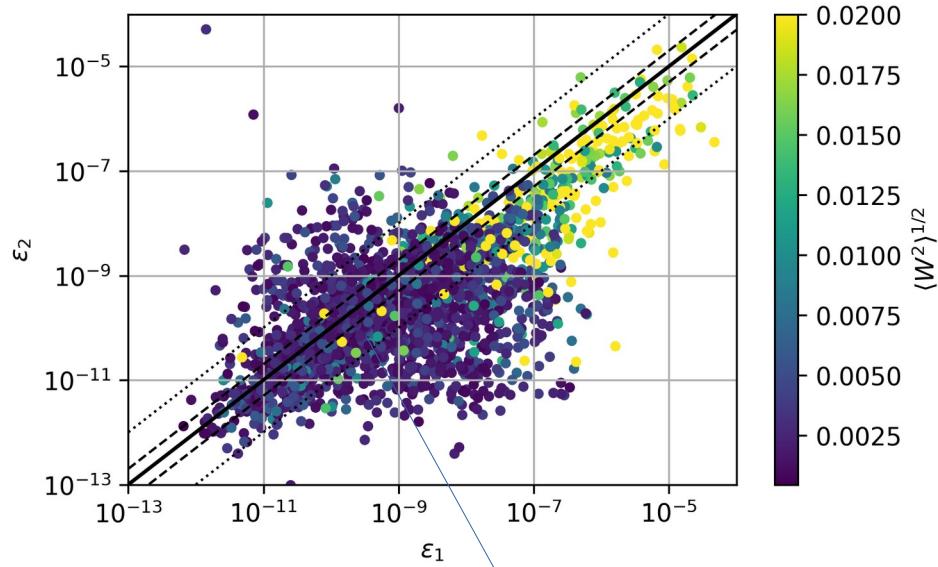




Epsilon 1 tends to
be larger, too
noisy

Unexpected and noisy
turnarounds

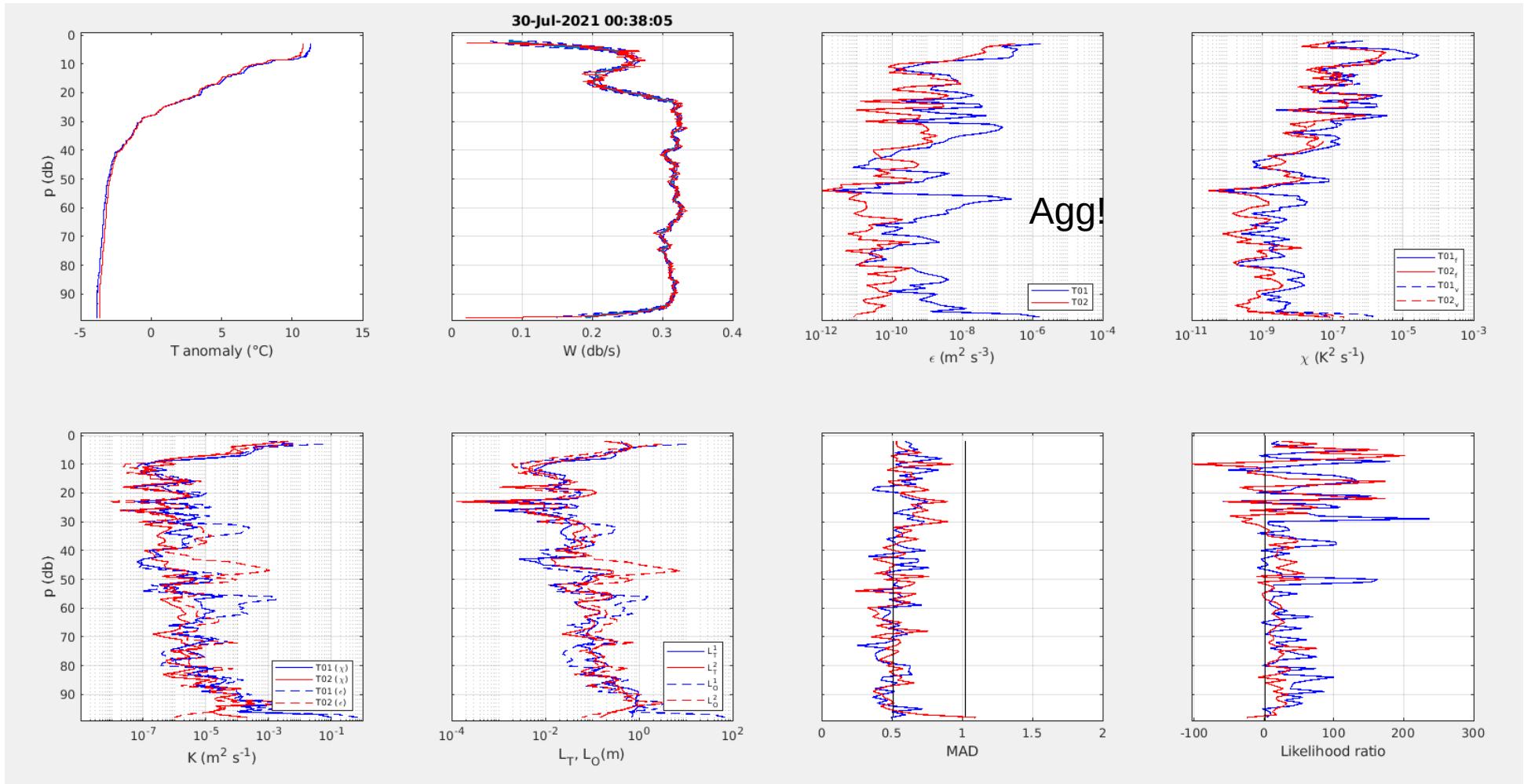
Sensor 2 crashes



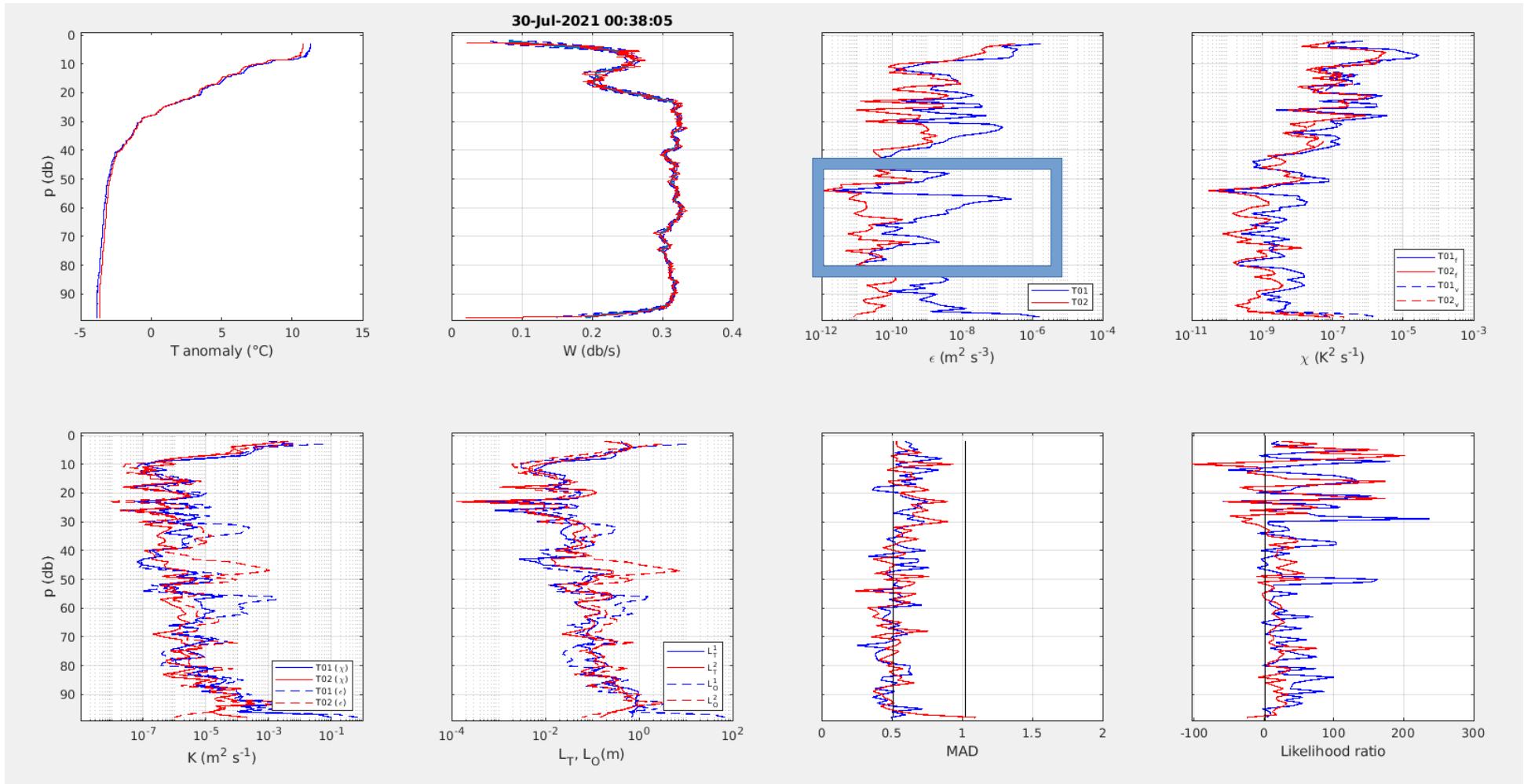
Lots of scatter and eps1 larger

(all data, no goodness-of-fit criteria applied)

Night 30 July, moderate wind speed ~8 m/s

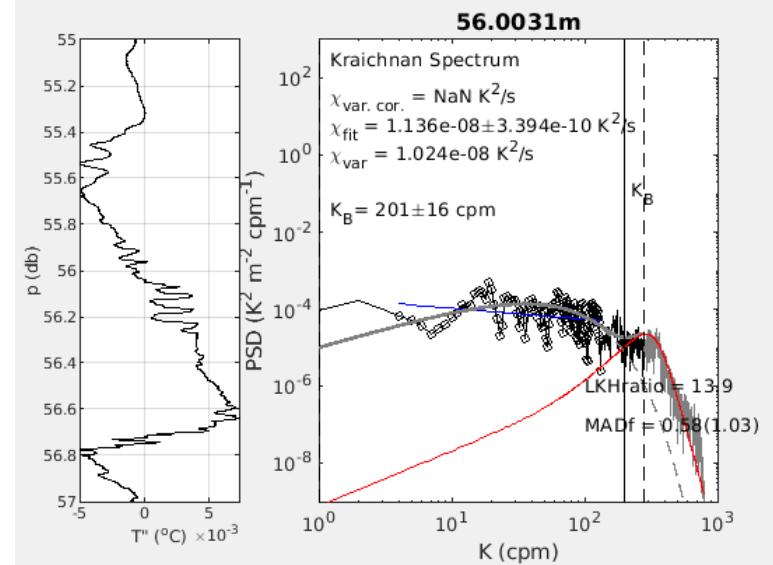
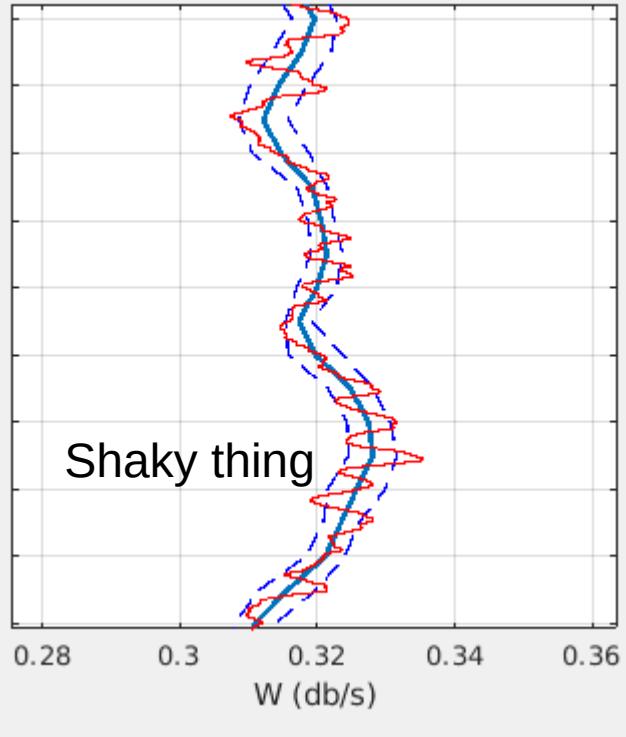


Night 30 July, moderate wind speed ~8 m/s

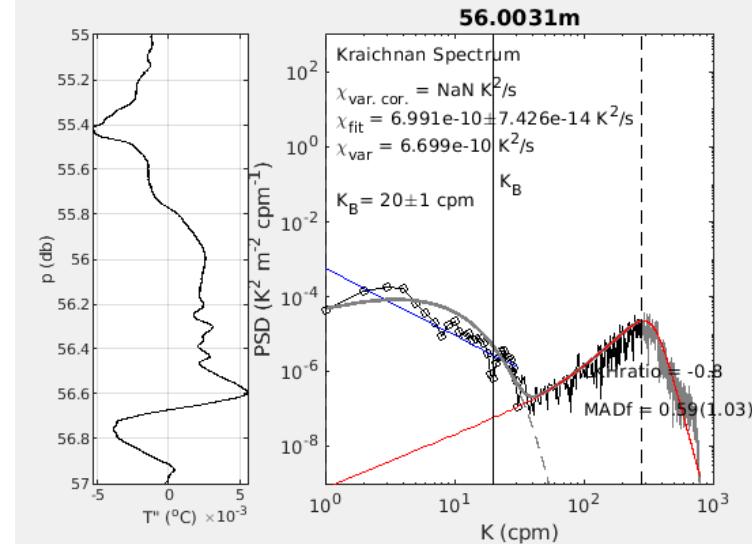


ZOOM!

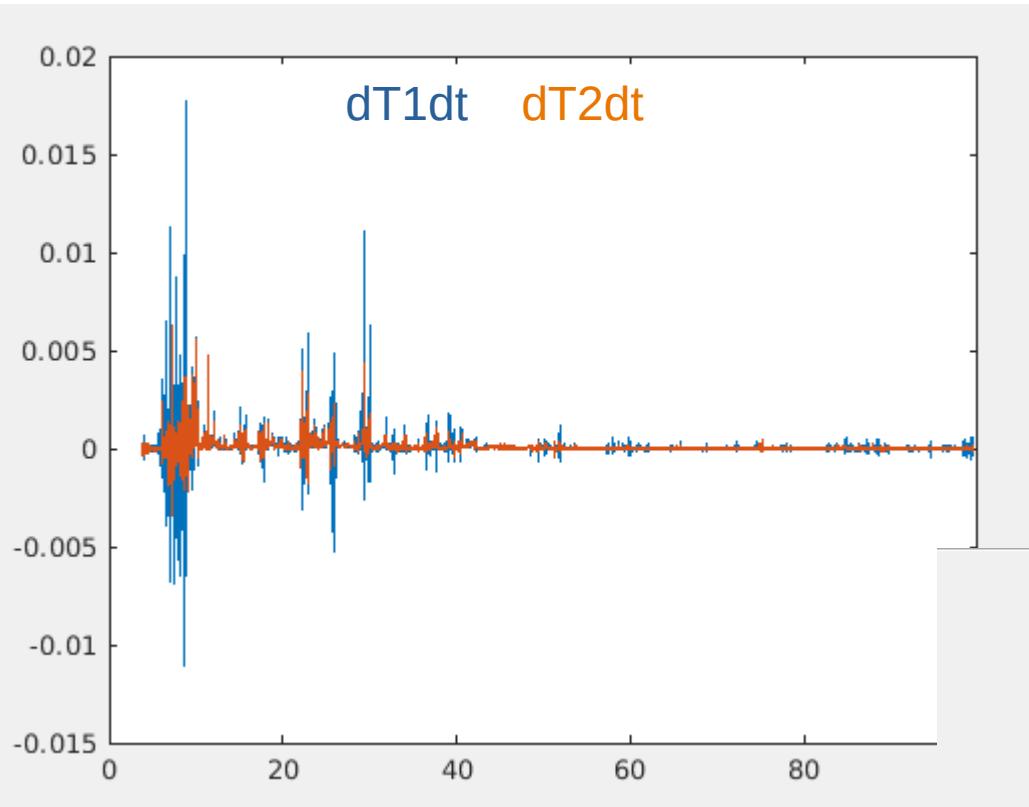
30-Jul-2021 00:38:05



Sensor 1

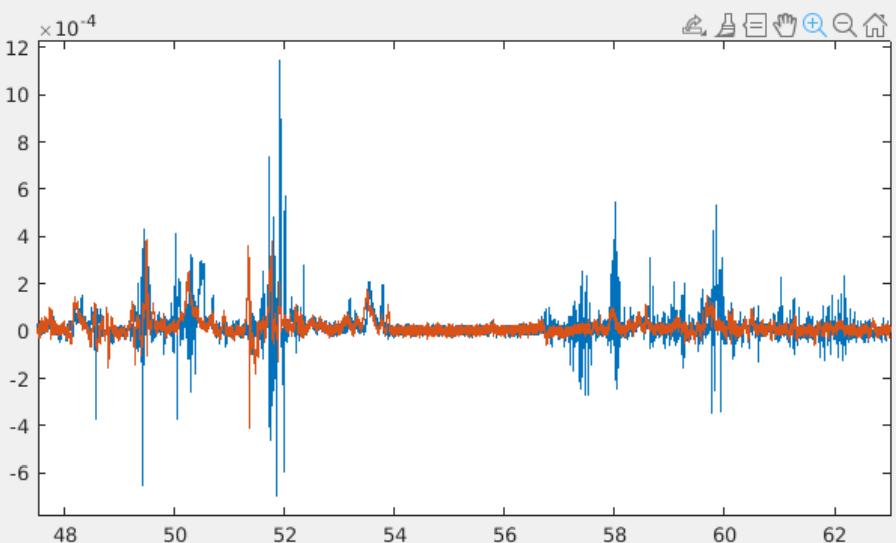


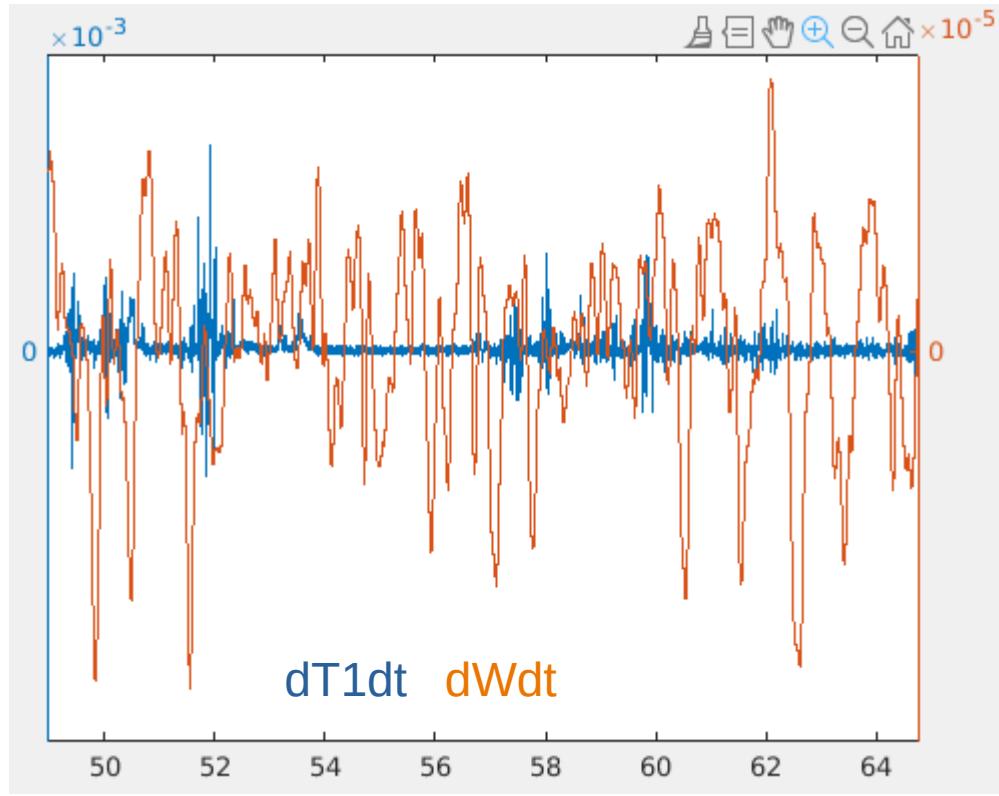
Sensor 2



Sensor 1 is noisier.
Is this because of instrument vibrations?
Is it catching the wake systematically?

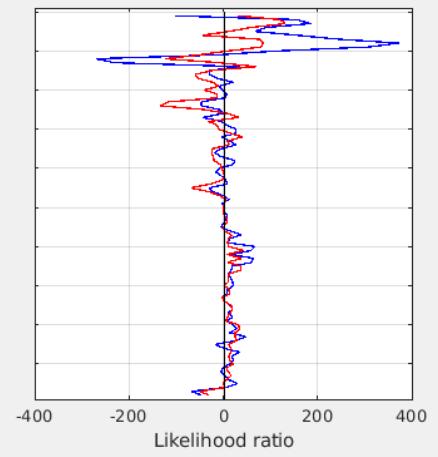
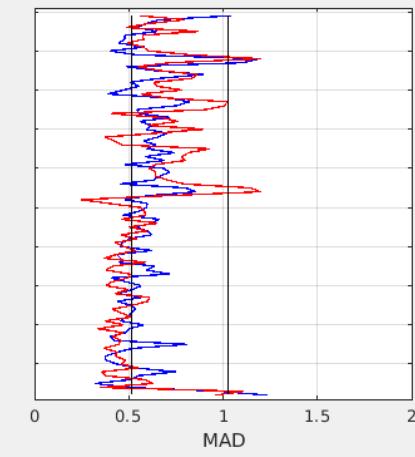
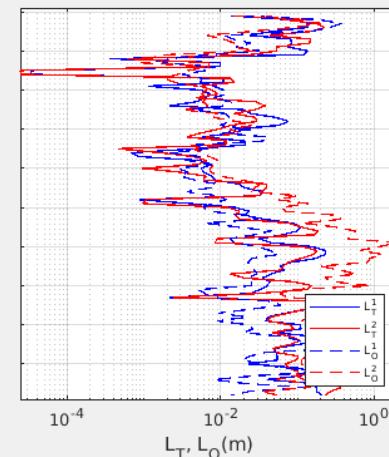
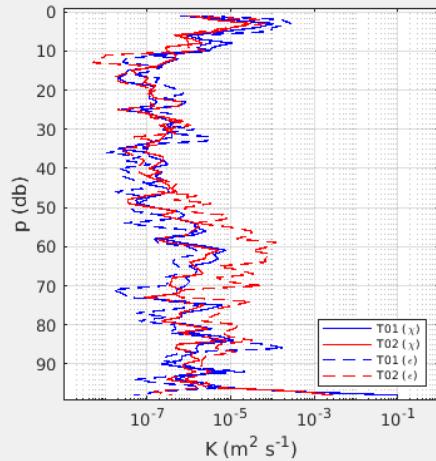
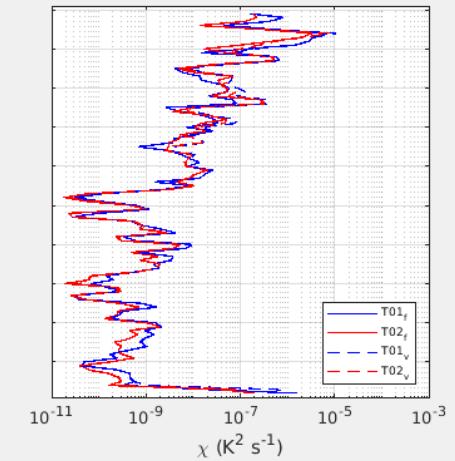
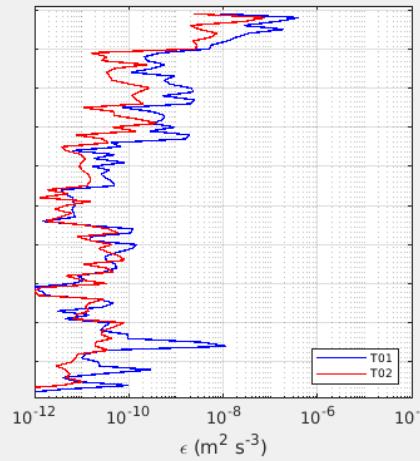
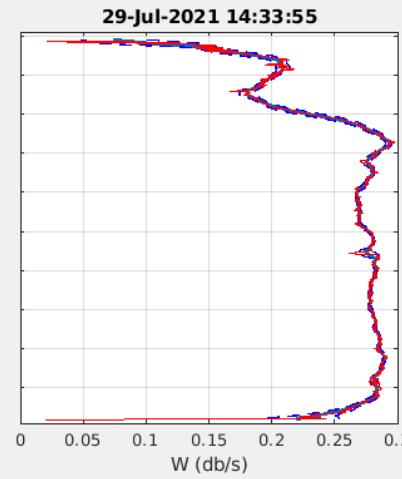
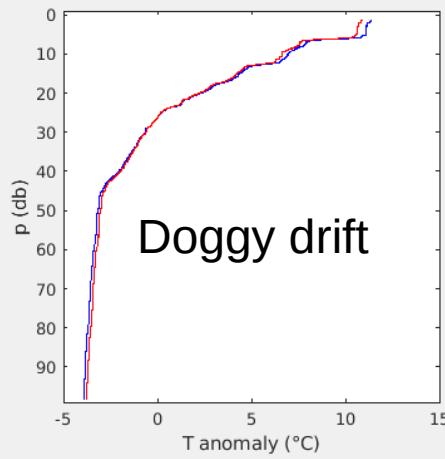
Zoom 50-60 dbar

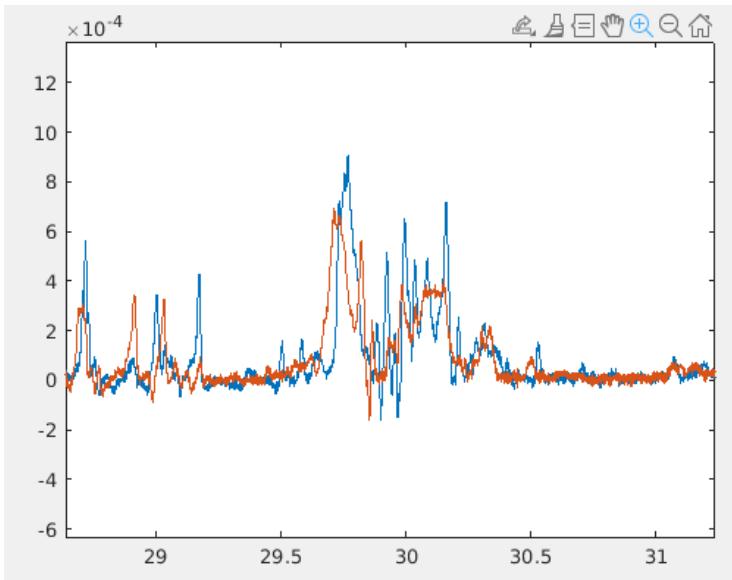
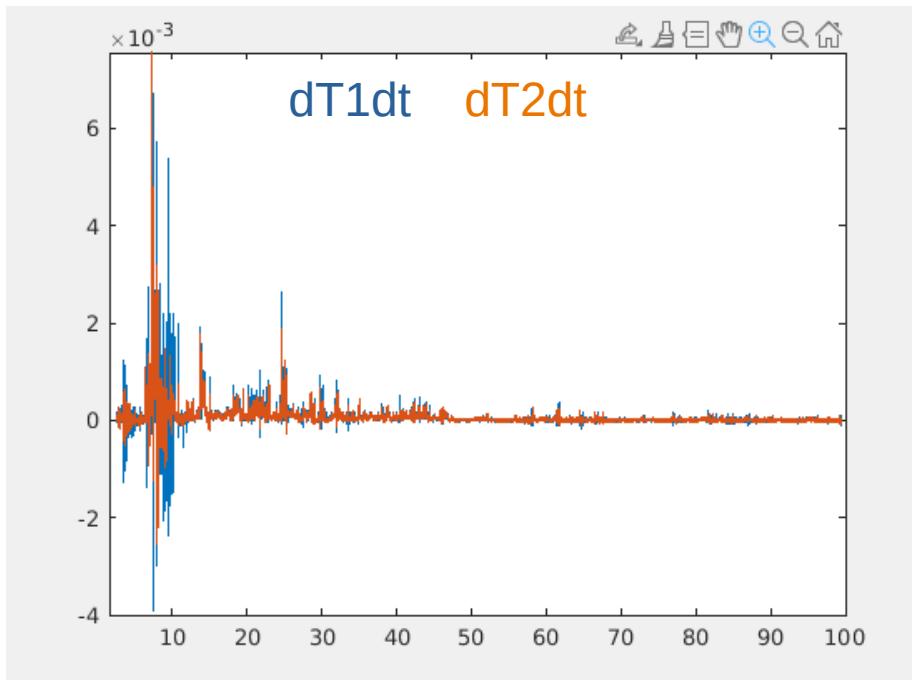




Not quite the same frequency as the acceleration

A less shaky profile



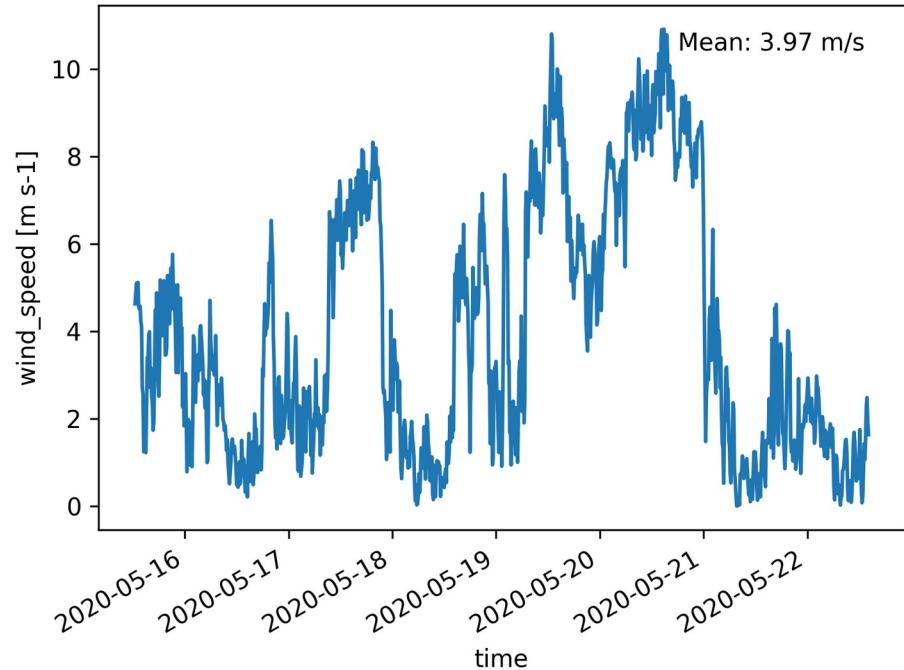
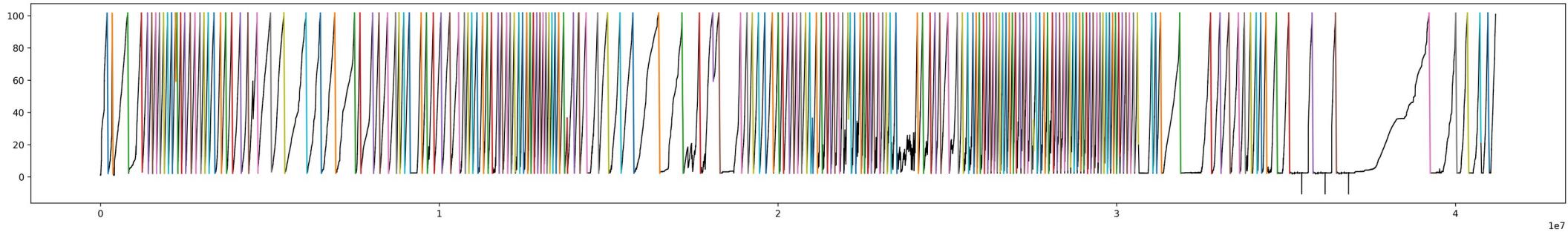


Still a bit spiky

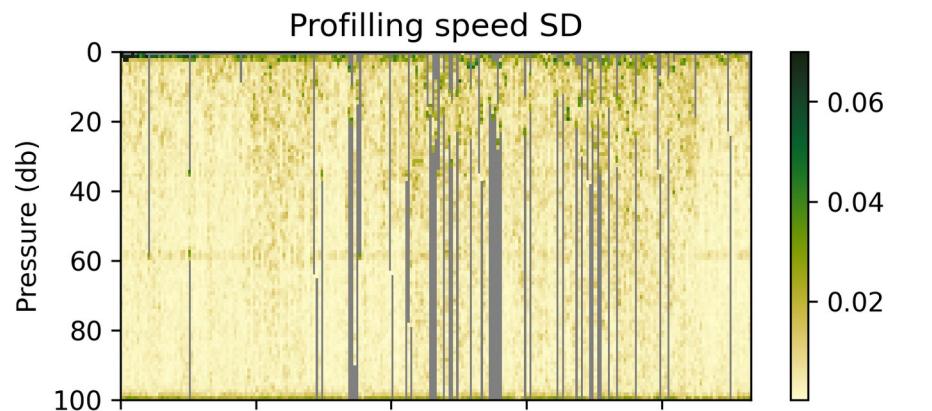
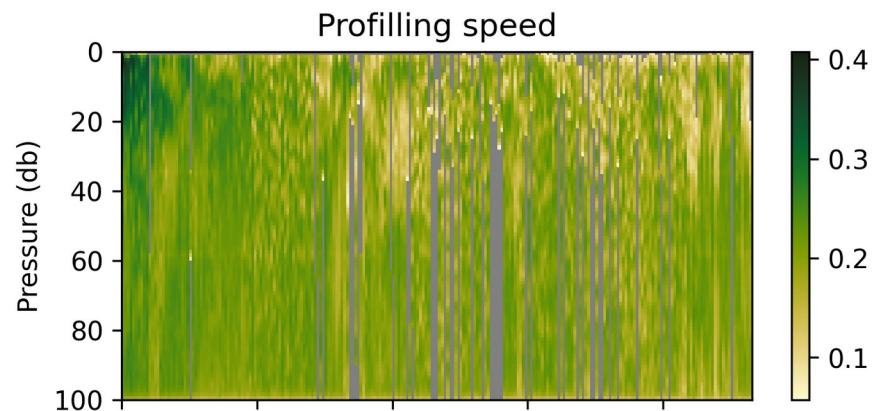
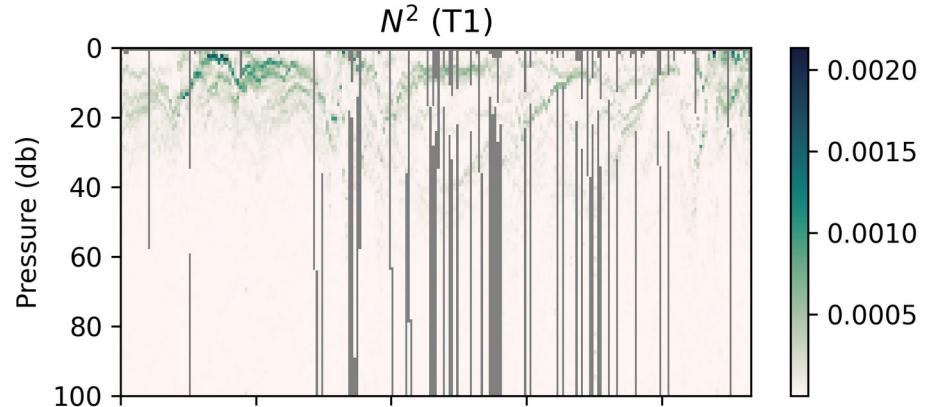
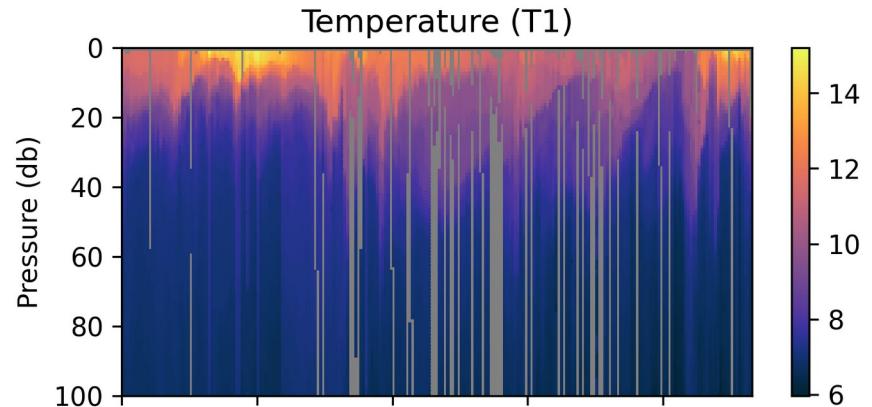
Perhaps the sensors were not in the best shape. T1 was spiky and drifty and T2 collapsed
But the thing is a bit shaky, which is not good, but difficult to tell how important it is

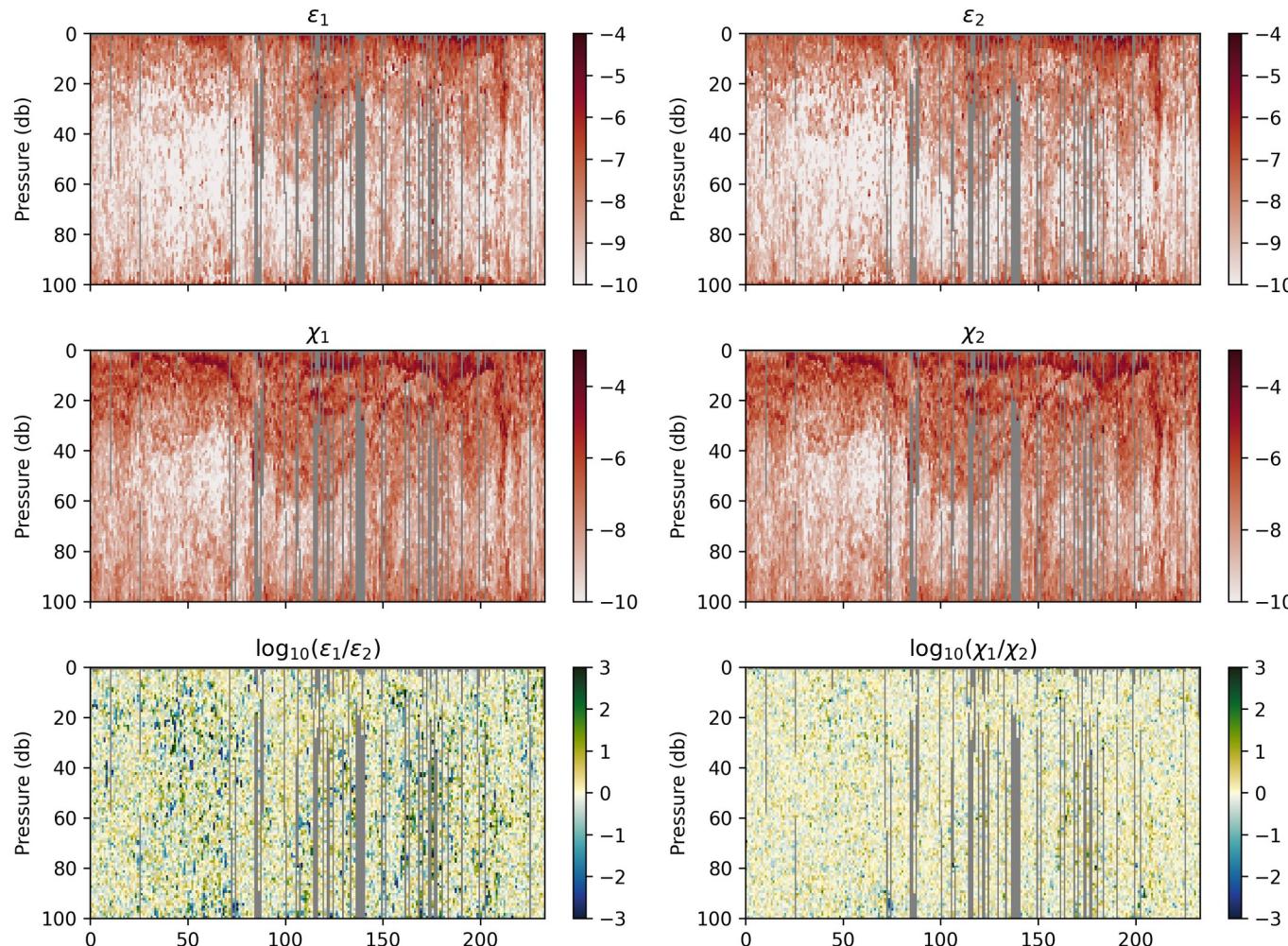
Different from other sampling periods?

Compare with May 2020
(quite windy)



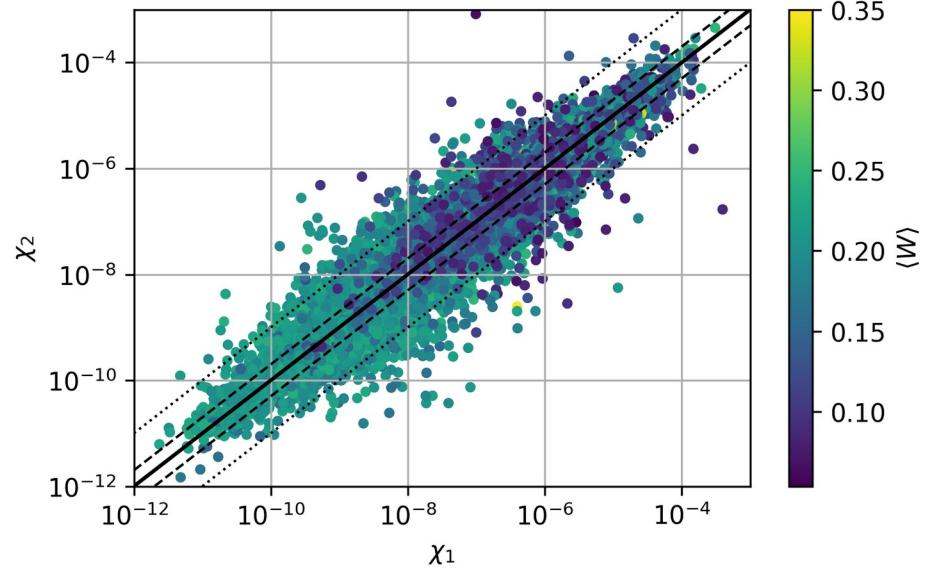
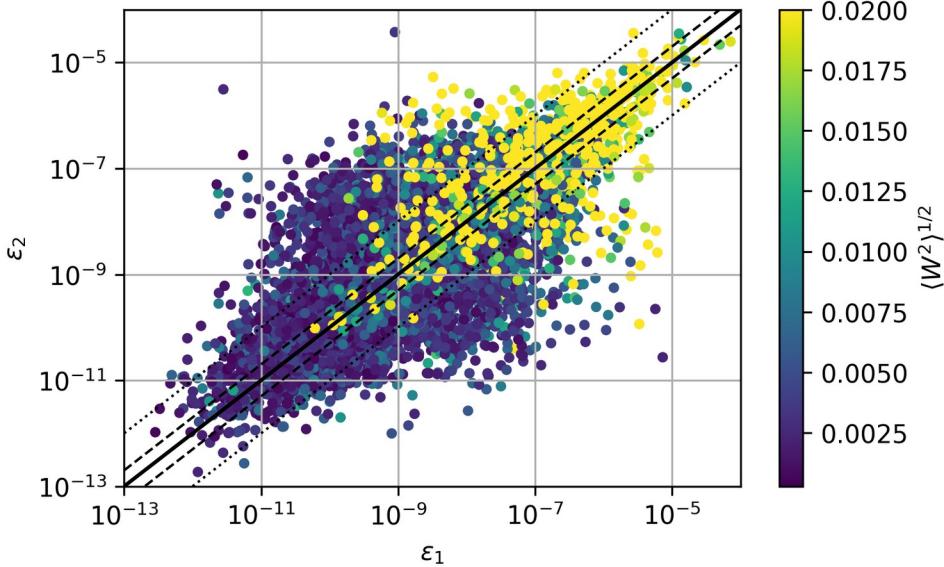
Nice kelvin type stuff?





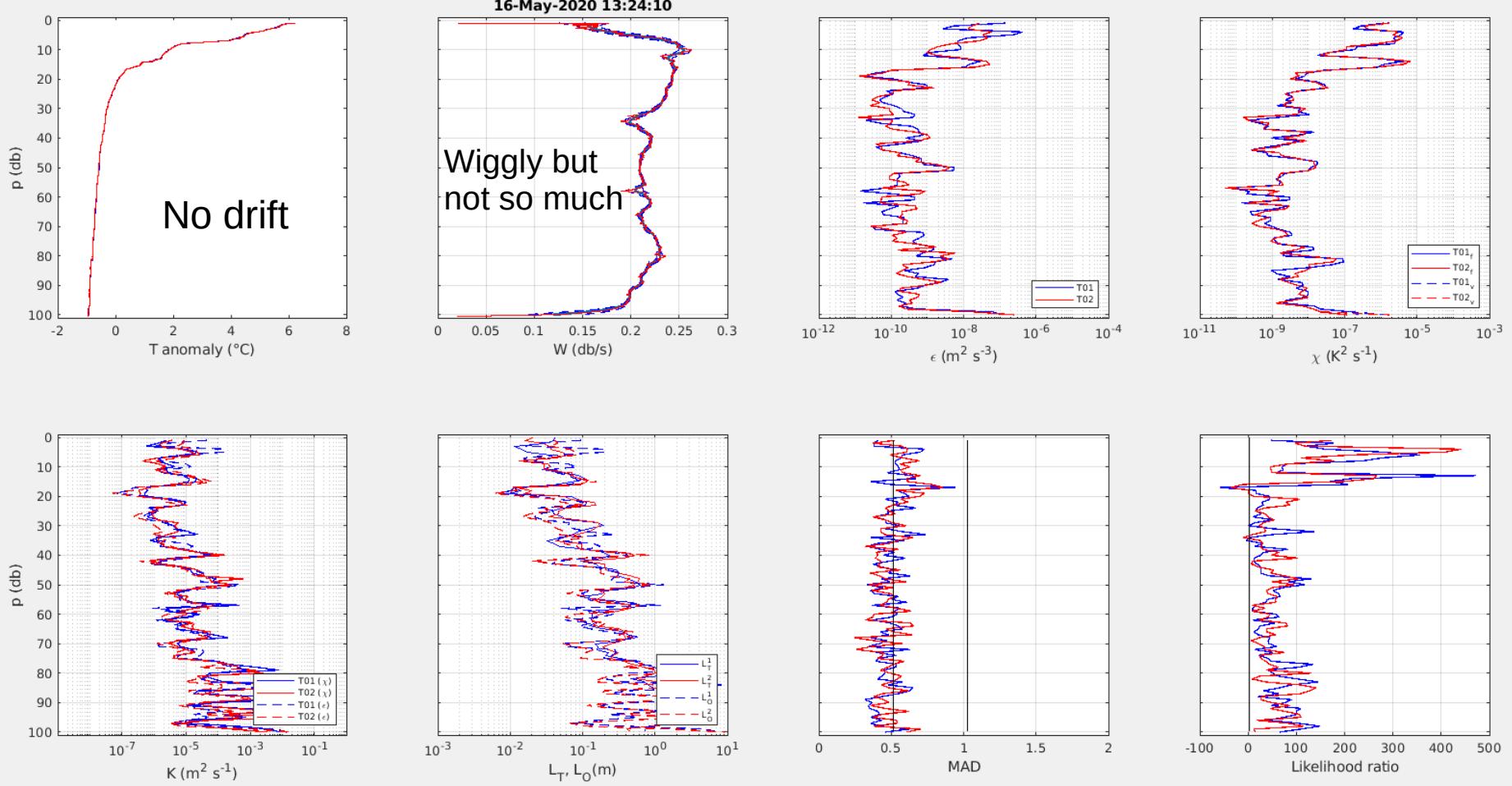
Quite turbulent
on the waves

But also a bit noisy

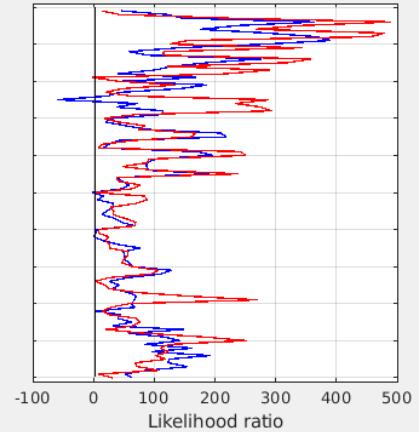
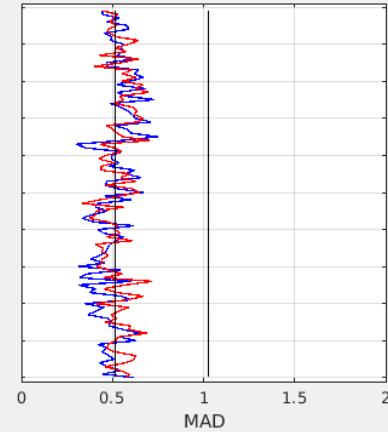
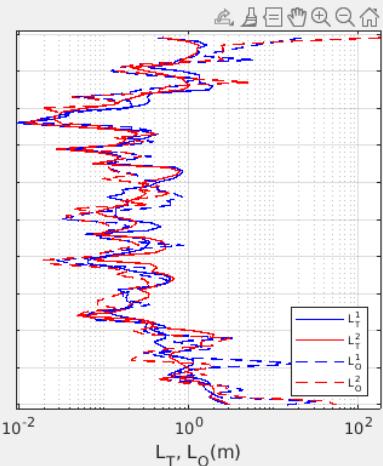
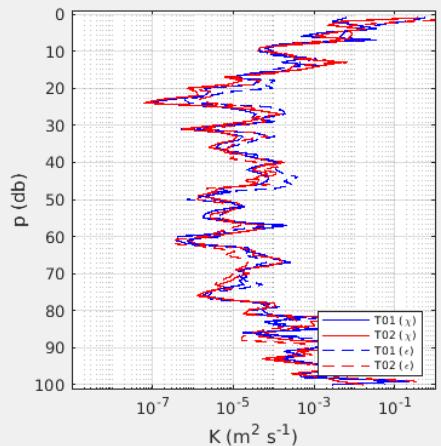
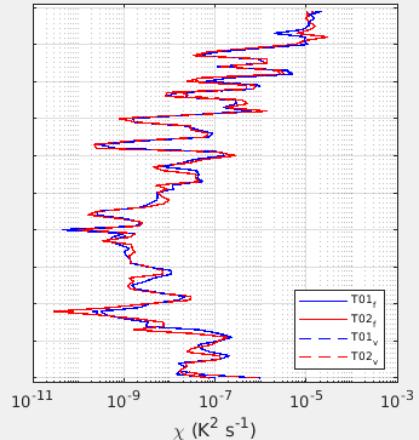
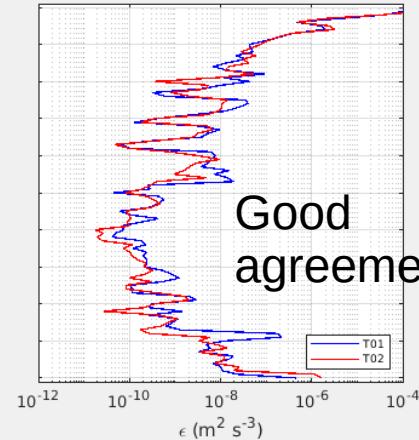
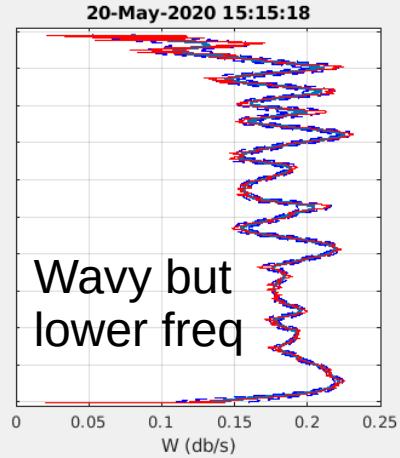
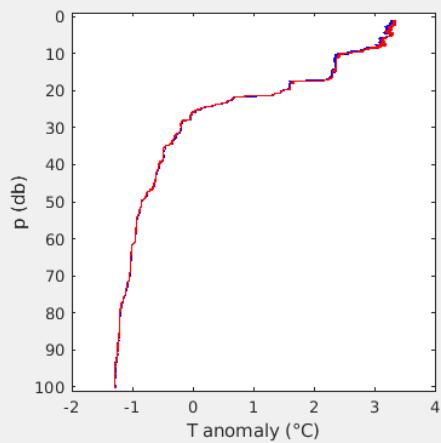


Epsilon is still very scattered but no apparent systematic bias

A quiet profile wind<2 m/s

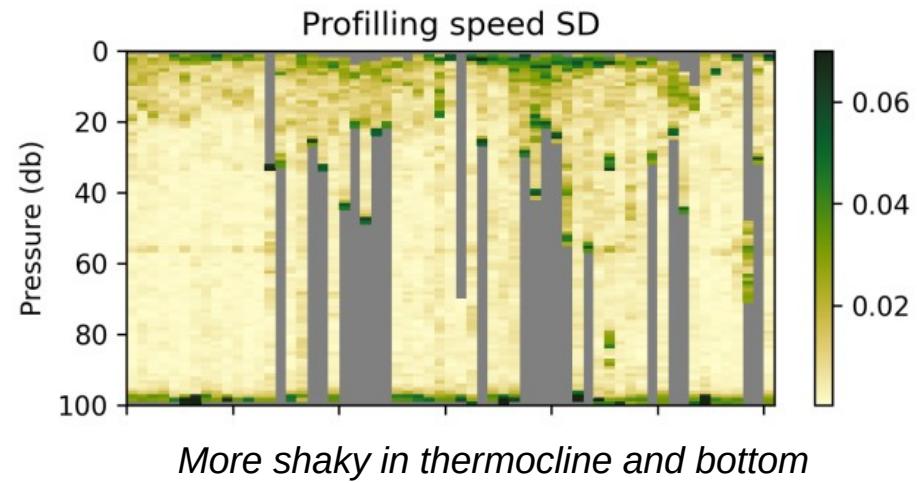
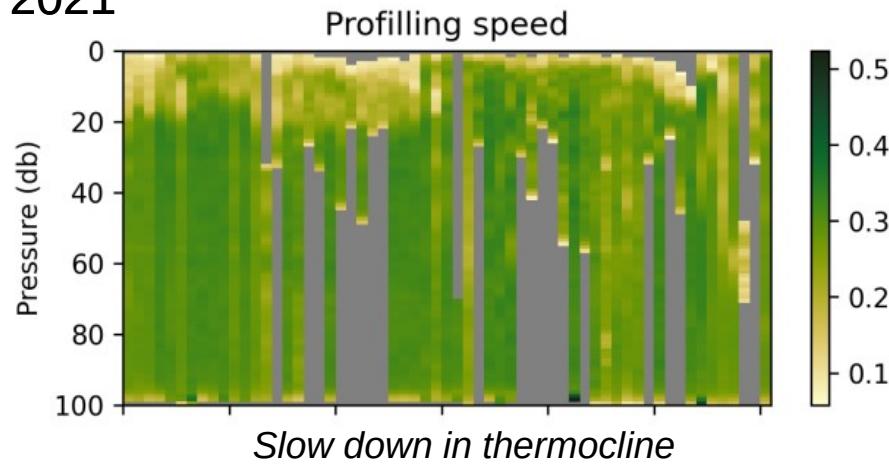


A shaky profile wind ~10 m/s

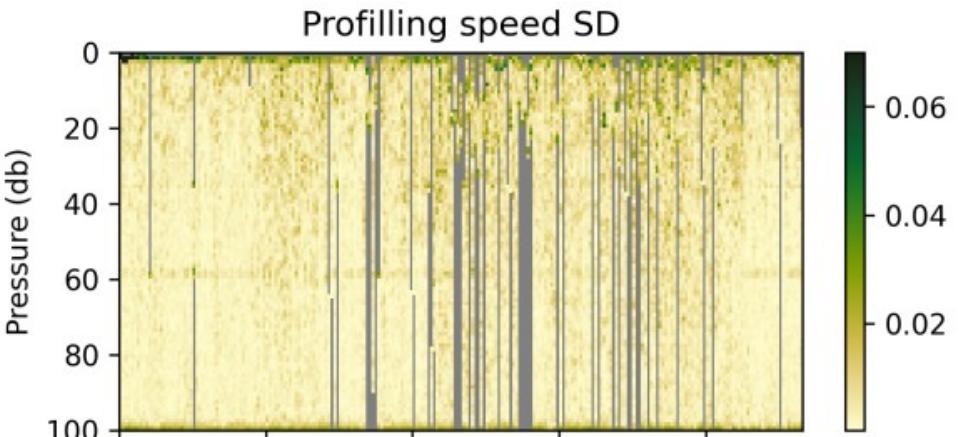
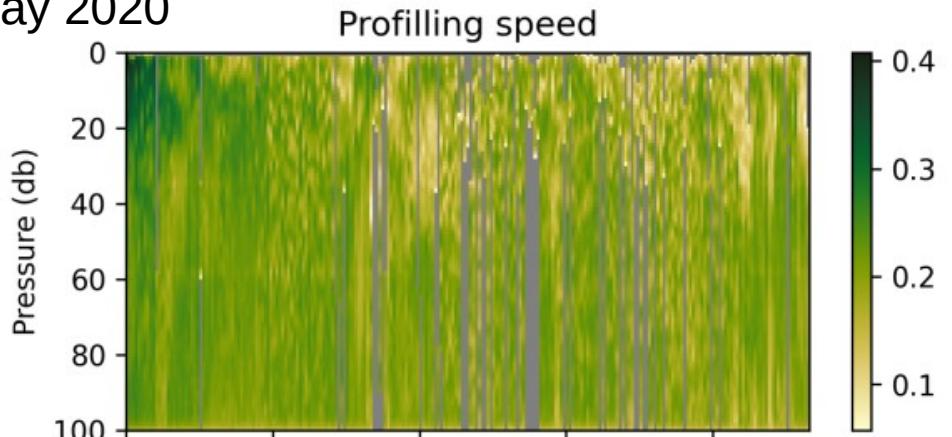


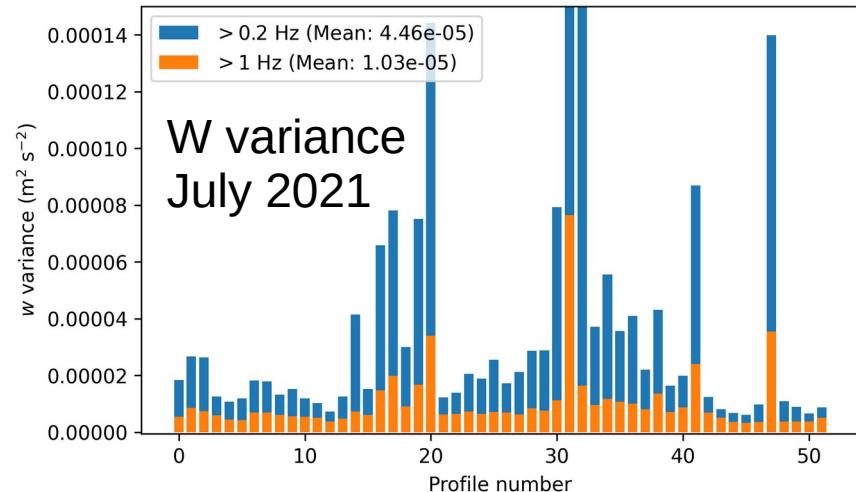
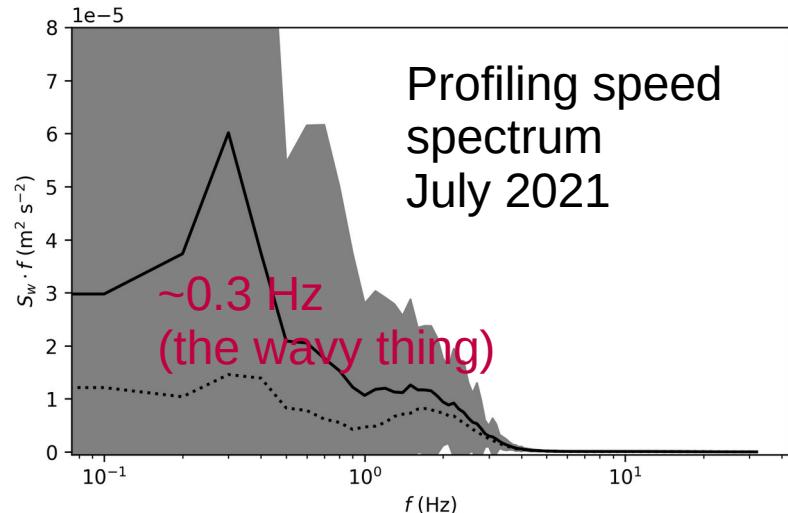
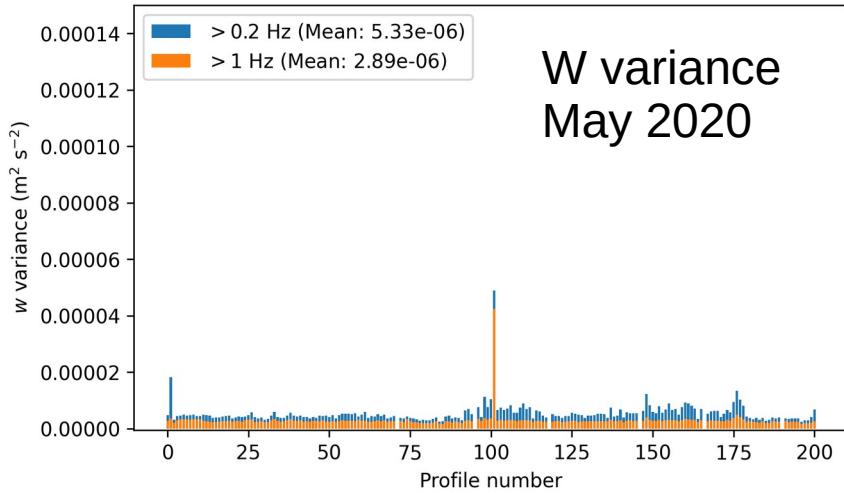
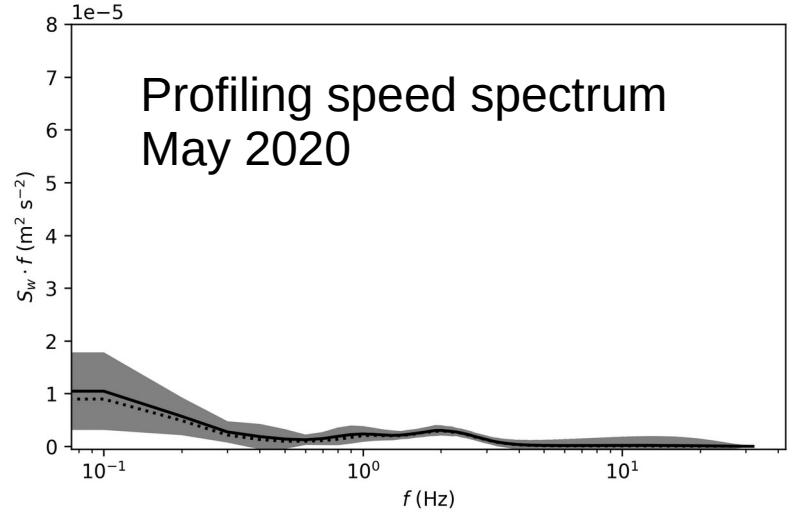
Is the profiler more shaky than the
original?

July 2021



May 2020





These calculations exclude the top 5 and bottom 10 m of the profile

Thoughts

- Sensors seemed to be faulty in the July 2021 deployment
- Profiling speed is very sensitive to stratification, more than with the free falling profiler. Why
- Wavy structures and accelerations in the vertical sampling speed could be an issue, particularly for epsilon estimates, chi could be more robust (again epsilon is very sensitive to wave number estimate, which is a function of profiling speed)
- It appears that the new wirewalker was shaking more than the old one, there seems to be a peak at 0.3 Hz which was not present in the other data. But more exploration is needed
- ADVICE: test different sensors, maybe part of the problem is gone
- Check if the oscillation is always present, and why
- Is there a way to ensure the sensors are not on the wake? A fin
- A way a quieter platform?