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# **Air Pollution in Livorno**

Dr. Axel Friedrich  
Germany

All ports in the Mediterranean Sea show high pollution level caused by ships. Emission control of ships is on a very low level compared to the road sector. For particles there is no emission limit for ships. The NO<sub>x</sub> limits are about 50 times more lax than for trucks

The fuel quality, in spite of some progress is much worse than for the road sector. The S- content limit in marine fuel is 500 times higher than for road vehicles.

Even after the SECA going into force in 2025 it is still 100 times higher than for road diesel fuel.

K

5620

PT  
CC

43

MODE 1



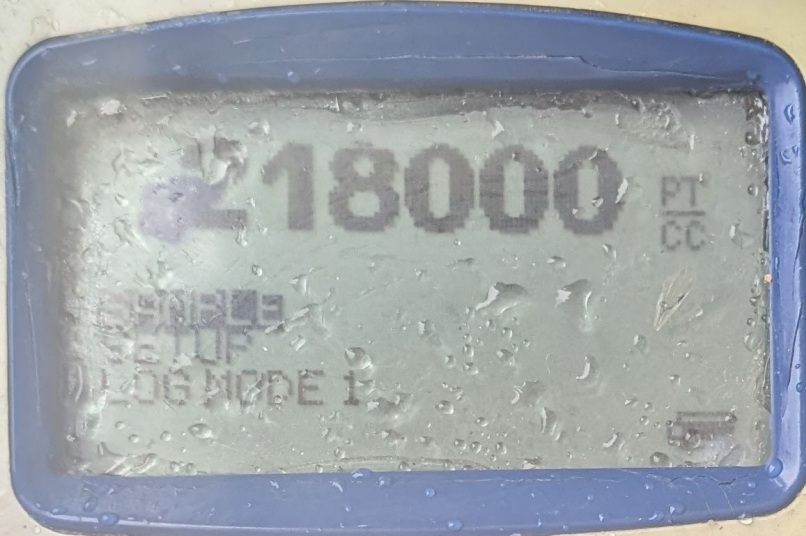








P-TRAK

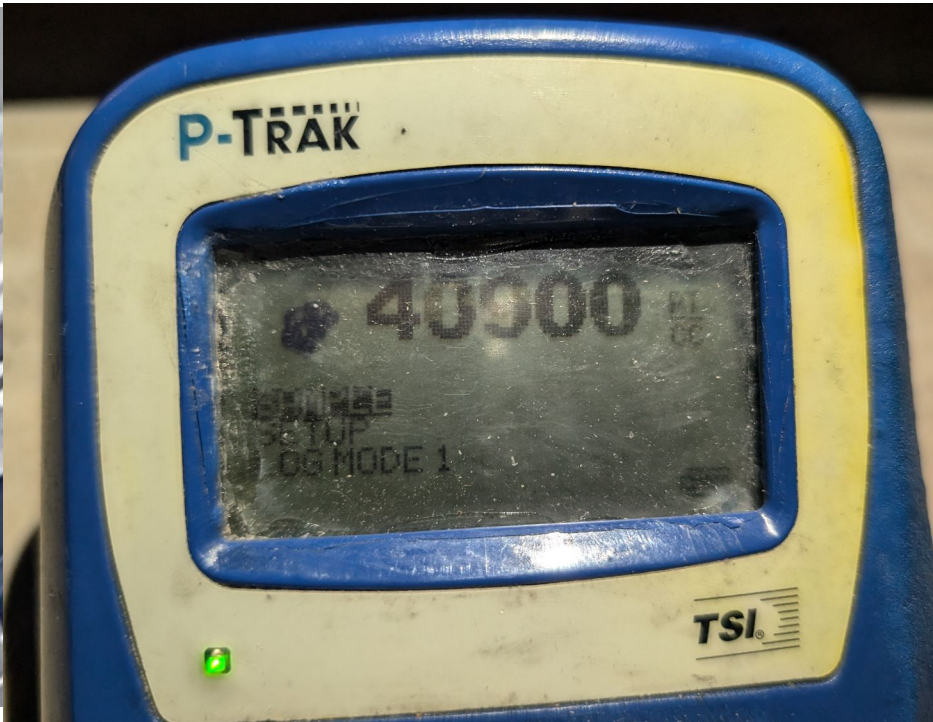
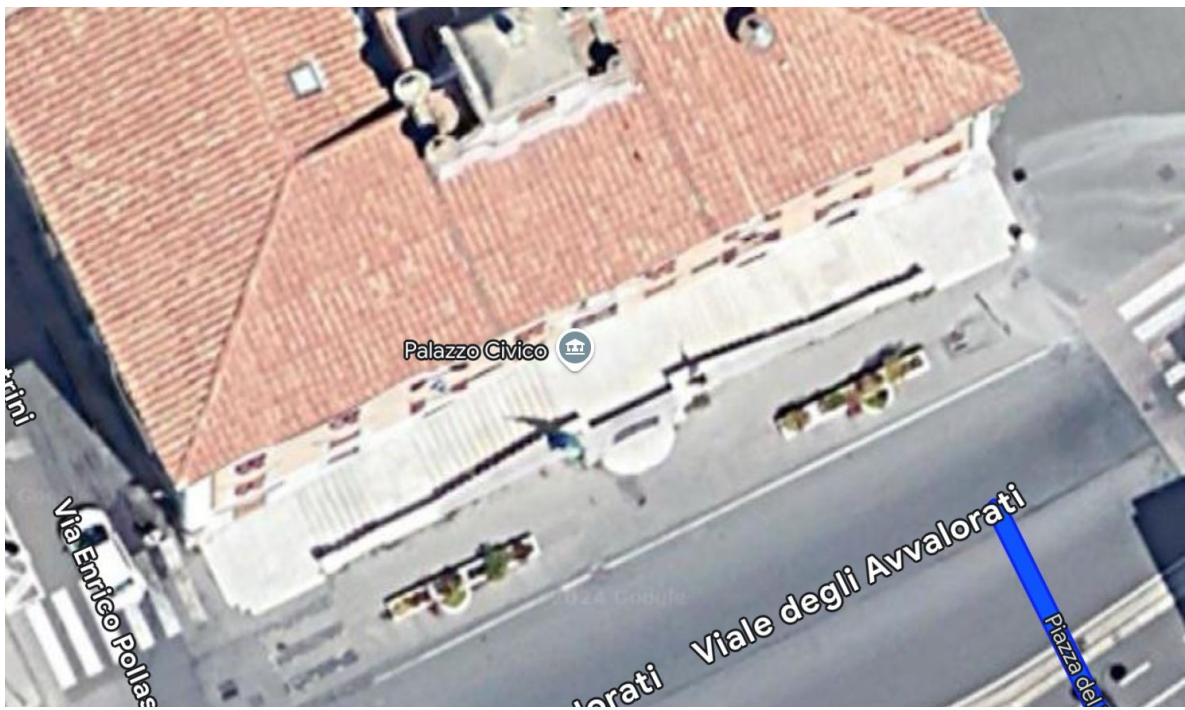


TSI





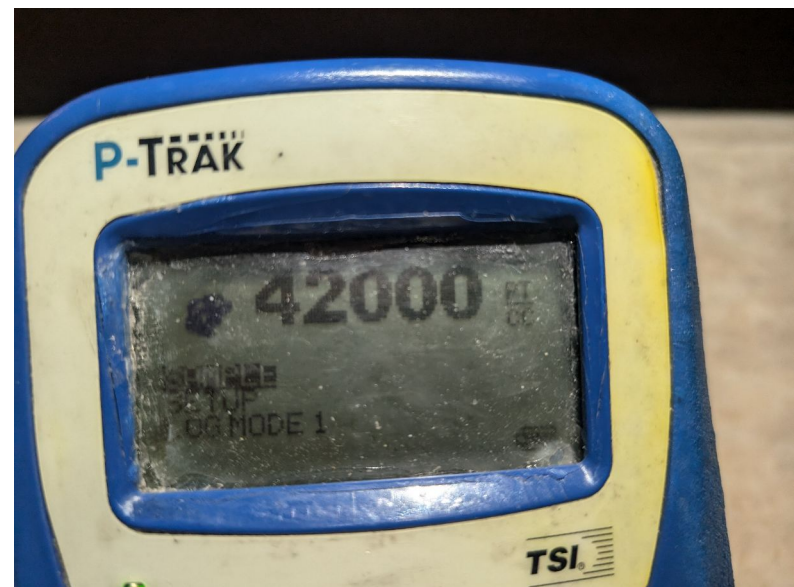
# Ultrafine Particle Number Measurement At Palazzo Civico



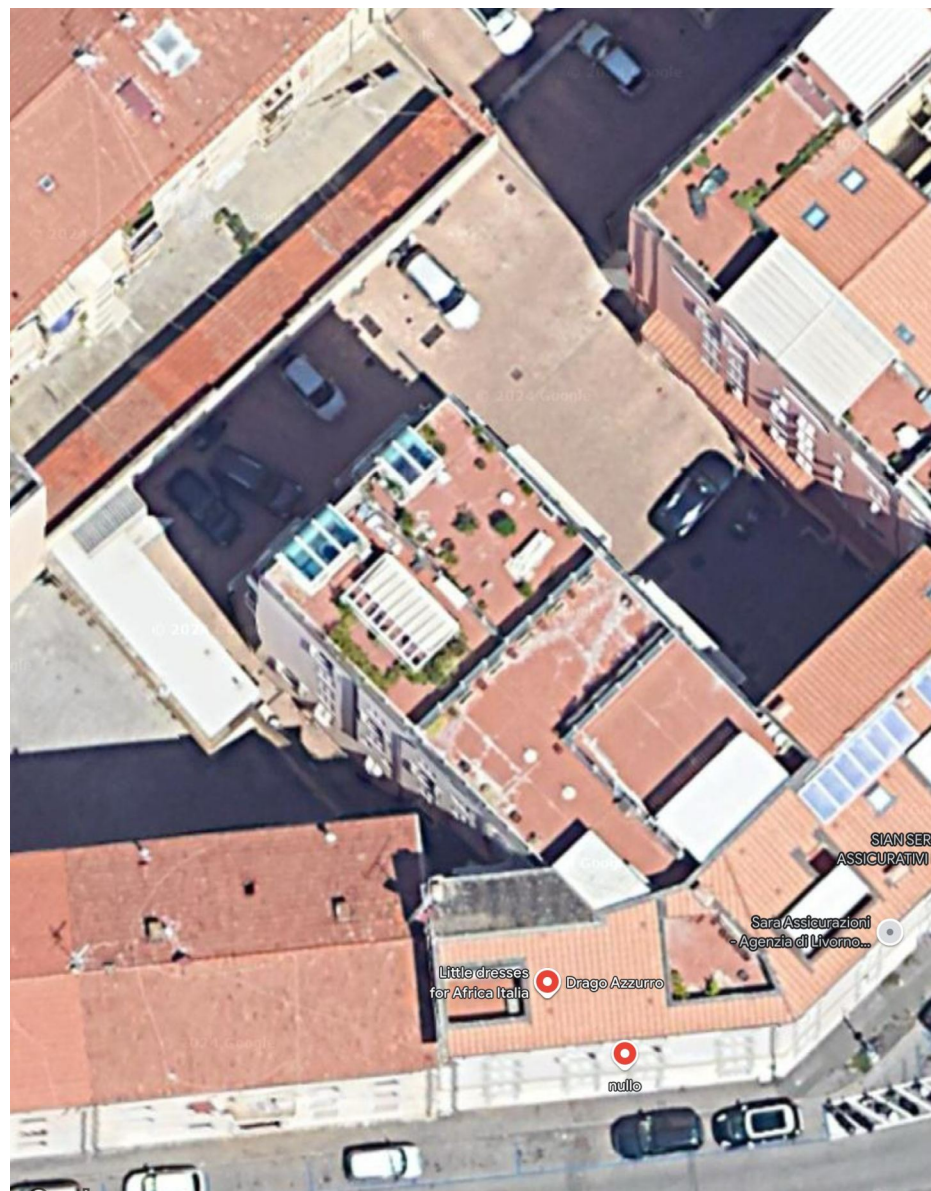




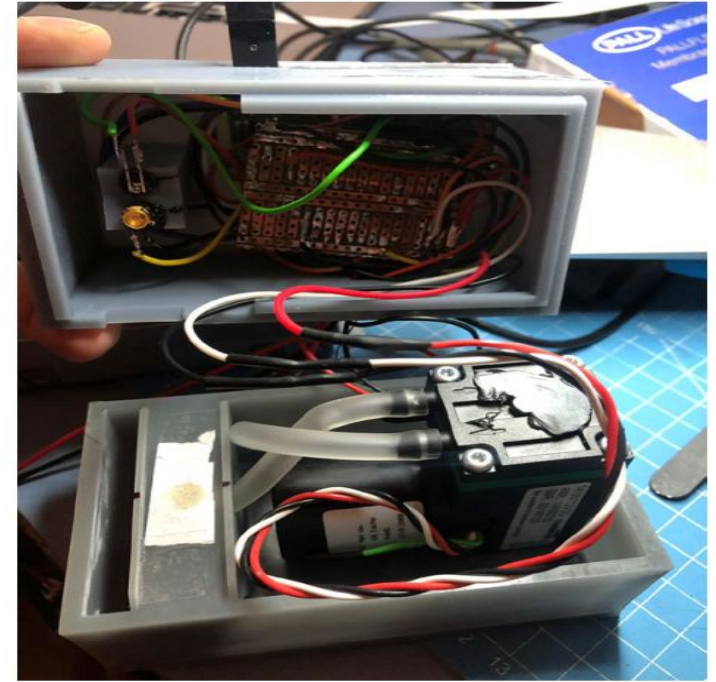
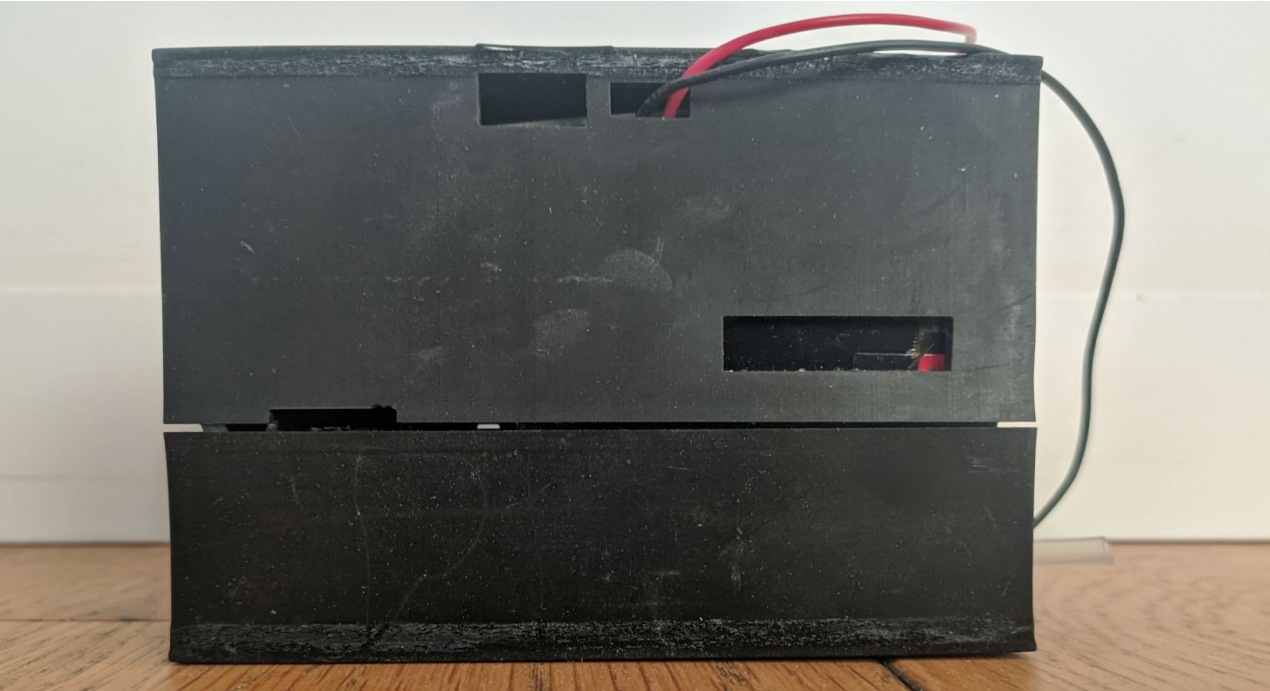
Living  
room



Terrace

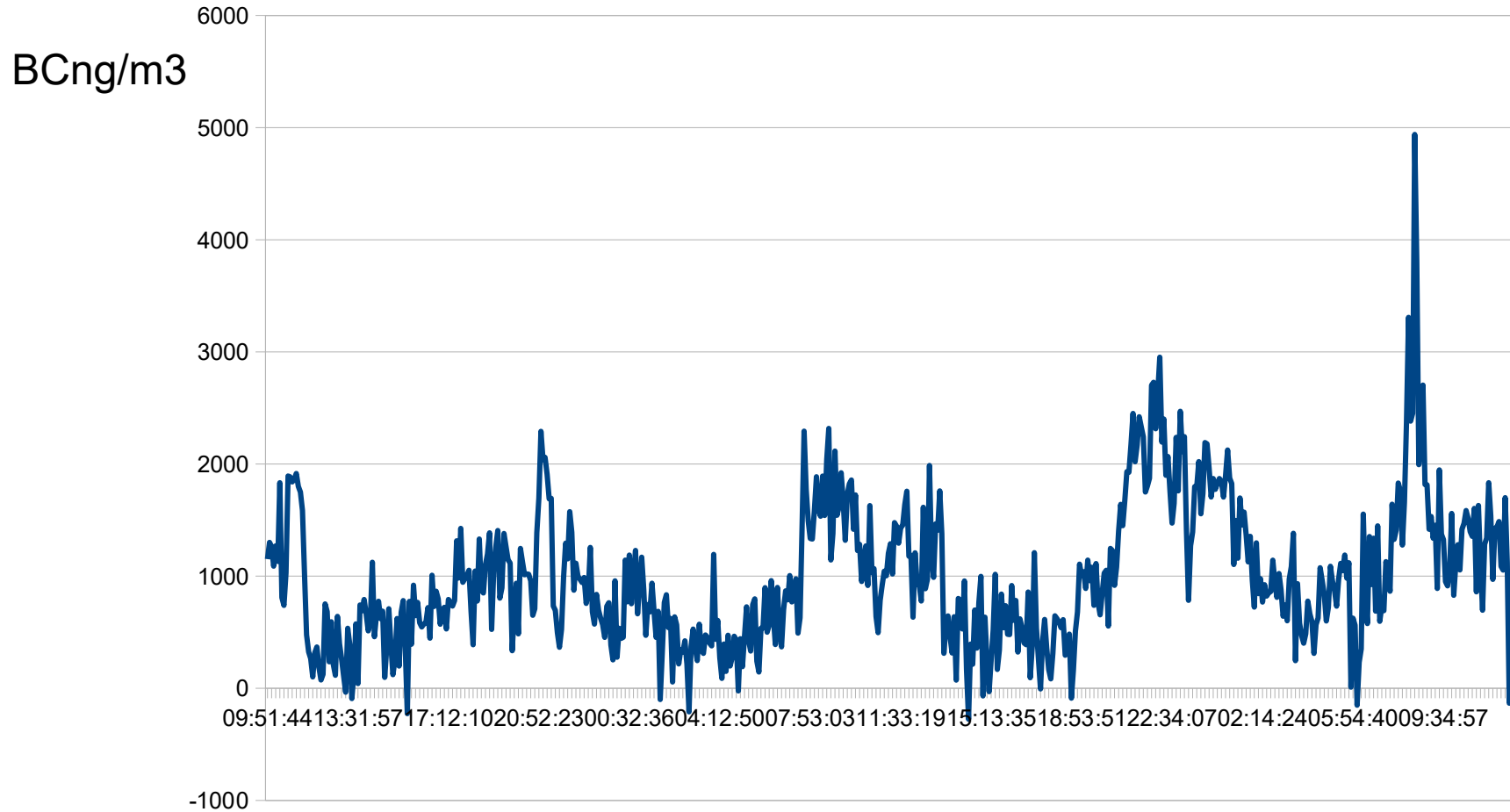


# Low Cost Black Carbon Measurement Device



[www.bcmeter.org](http://www.bcmeter.org)

# Black Carbon Measurement near the Port of Livorno



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