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SAPIENZA UNIVERSITÀ DI ROMA



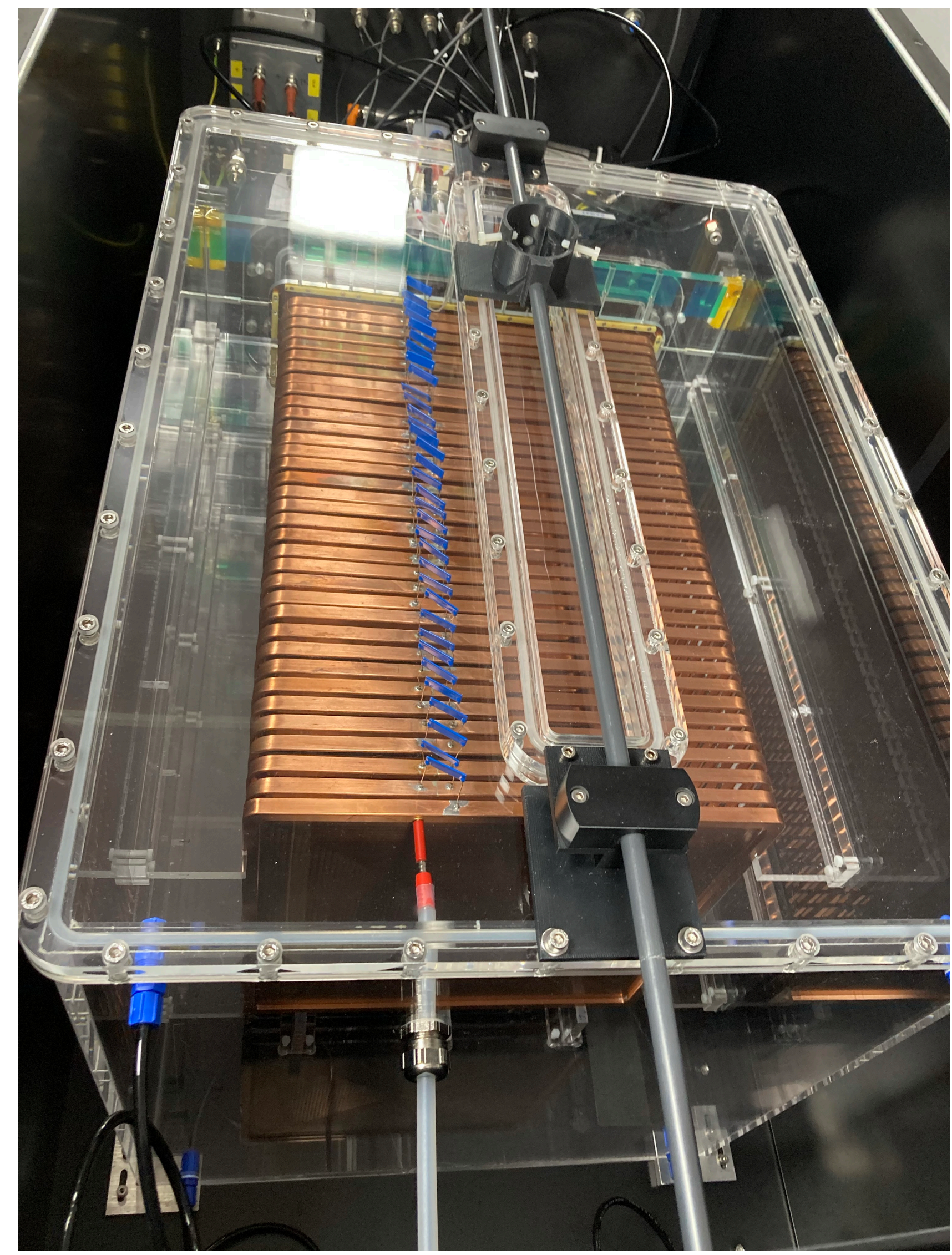
Istituto Nazionale di Fisica Nucleare

Restart of RUN5

Stefano Piacentini

General Meeting

23/05/2024

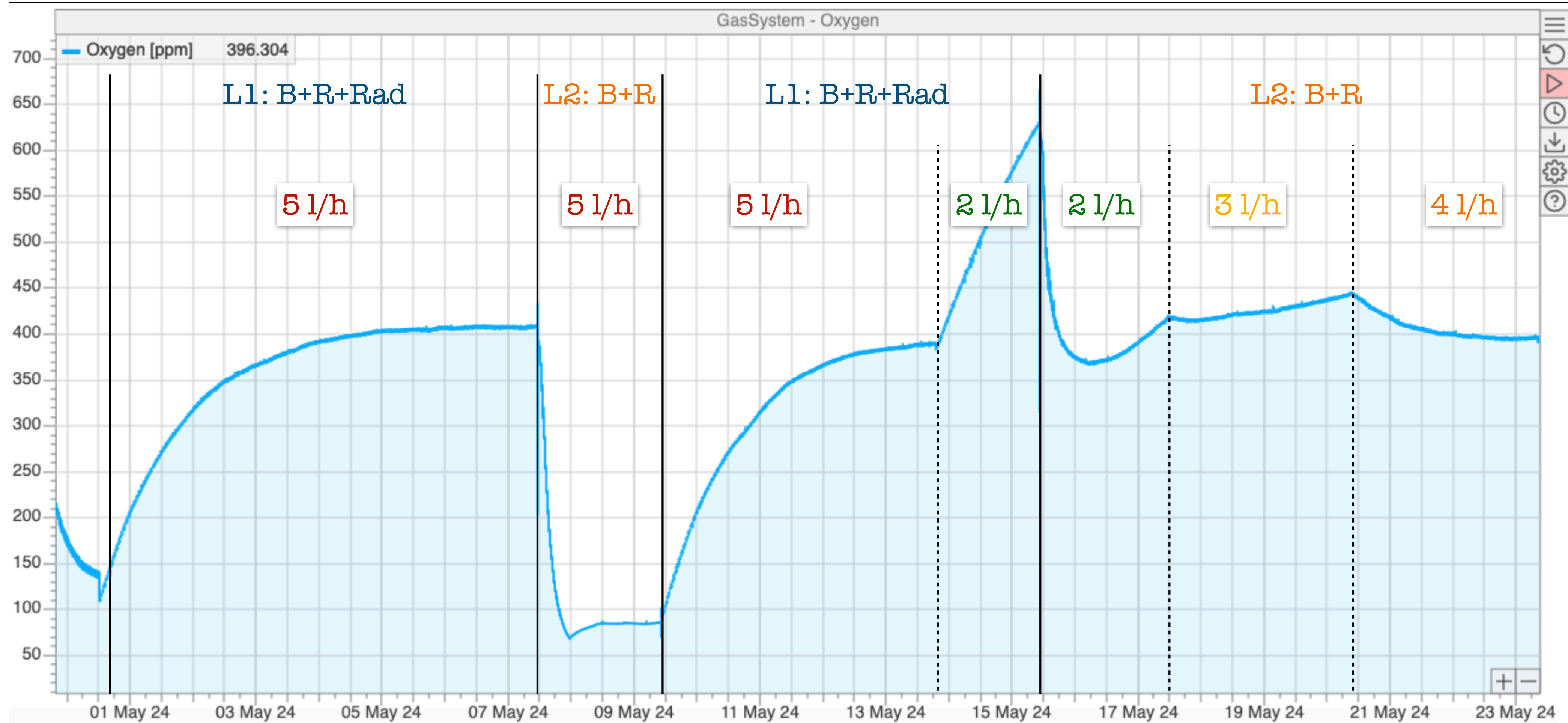


RUN 5: logbook so far

Start	Stop	Numbers	Description	Total Runs	Data pics	Gas Flow	Filter Line 1	Filter Line2	Notes
2024-05-03 15:58:18	2024-05-07 11:18:11	56894 - 57524	Bkg + Daily Calibrations	630	207369	5	Blue+Red+Radon	Not in use	Restart after technical intervention on the gas system. Filters probably absorbed impurity (water, radon, nitrogen).
2024-05-08 8:38:46	2024-05-09 10:34:58	57525 - 57734	Bkg + Daily Calibrations	209	67195	5	Not in use	Blue+Red	Line 1 is being cleaned with the vacuum pump. Data taking restarted after ~20 h wrt the previous range of runs.
2024-05-09 11:24:02	2024-05-13 18:53:38	57735 - 58528	Bkg + Daily Calibrations	793	262563	5	Blue+Red+Radon	Not in use	Line 2 operation is restored. Data taking restarted suddenly after the swap. Oxygen level raising, and density of the gas initially below nominal value. Water flow increased and sensor temperature decreased from -17 °C to -21 °C.
2024-05-13 18:53:45	2024-05-15 10:30:00	58529 - 58849	Bkg + Daily Calibrations [Low Gas Flow]	320	105349	2	Blue+Red+Radon	Not in use	Gas flow set to 2 l/h to study behavior of oxygen.
2024-05-15 10:30:00	2024-05-17 11:08:46	58850 - 59245	Bkg + Daily Calibrations [Low Gas Flow]	395	129910	2	Not in use	Blue+Red	Gas flow set to 2 l/h to study behavior of oxygen.
2024-05-17 11:08:51	2024-05-17 12:03:27	59246 - 59252	Bkg + Daily Calibrations [Low Gas Flow]	6	2405	3	Not in use	Blue+Red	Gas flow set to 3 l/h to decrease oxygen and humidity concentrations.
2024-05-17 12:05:39	2024-05-20 9:11:44	59253 - 59777	Bkg + Daily Calibration [Low Gain - Low Gas flow]	524	176578	3	Not in use	Blue+Red	Official start of RUN5. Low gain configuration [GEMS HV = 420V and Drift field = 500 V/cm].
2024-05-20 9:14:45	Now	59778 - Now	Bkg + Daily Calibration [Low Gain]	-	-	4	Not in use	Blue+Red	We increased the gas flow to 4 l/h to compensate the slow increase oxygen and humidity and the slow decrease of the LY

Oxygen

- Oxygen levels now measured with a **new sensor**
- Oxygen filters seem **saturating** and the vacuum pump cleaning seems not to work



Humidity

- Humidity levels seems increasing since beginning of the months
- Currently under investigation: possible leakage?

