RPC eco-gas at GIF++
Weekly report

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April 4th, 2024

Stability run 209

Stability - Run ID 0209

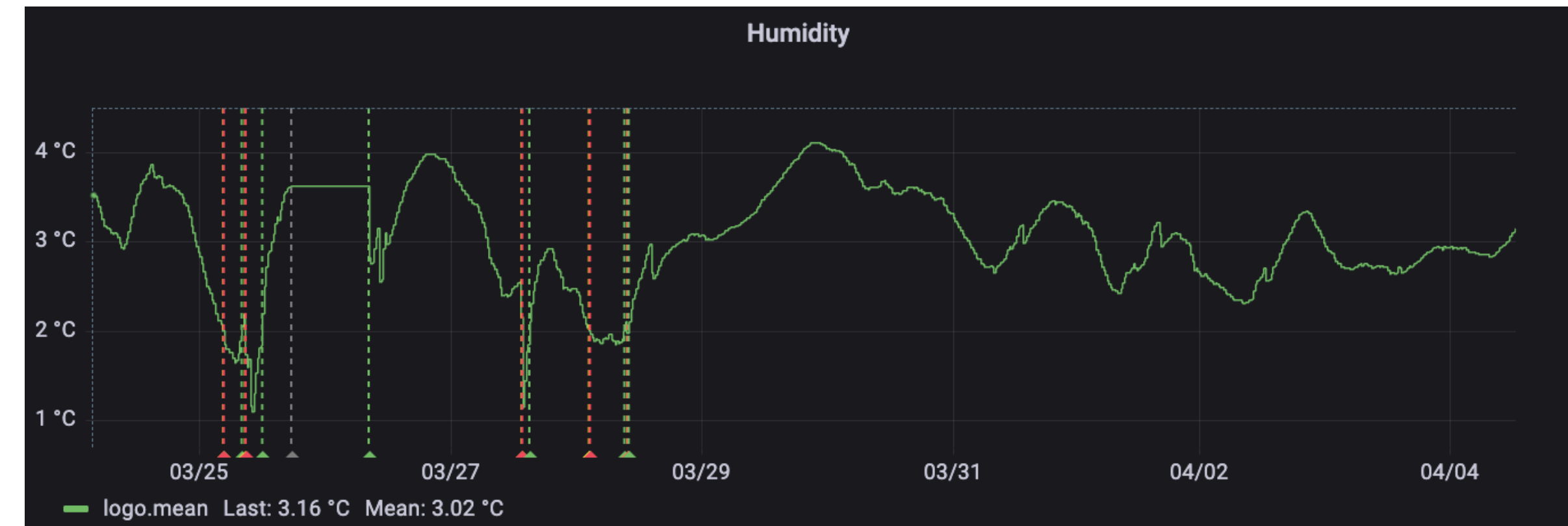Summary   Run config   Log file   Monitoring   Plots

Run start: 2024-03-27 16:01:58   Status: FINISHED
Run end/last action: 2024-04-03 11:38:55   Duration: 6 days, 18 hours, 36 minutes
Comments: stability ECO2

Save changes   Delete run

Humidity quite stable during the week

- No major problems during the shift
  - Observed a slight reduction of current for some RPC chambers in the new stability run (210), started yesterday evening (shown in the next slides)

Stability run overview

Check list

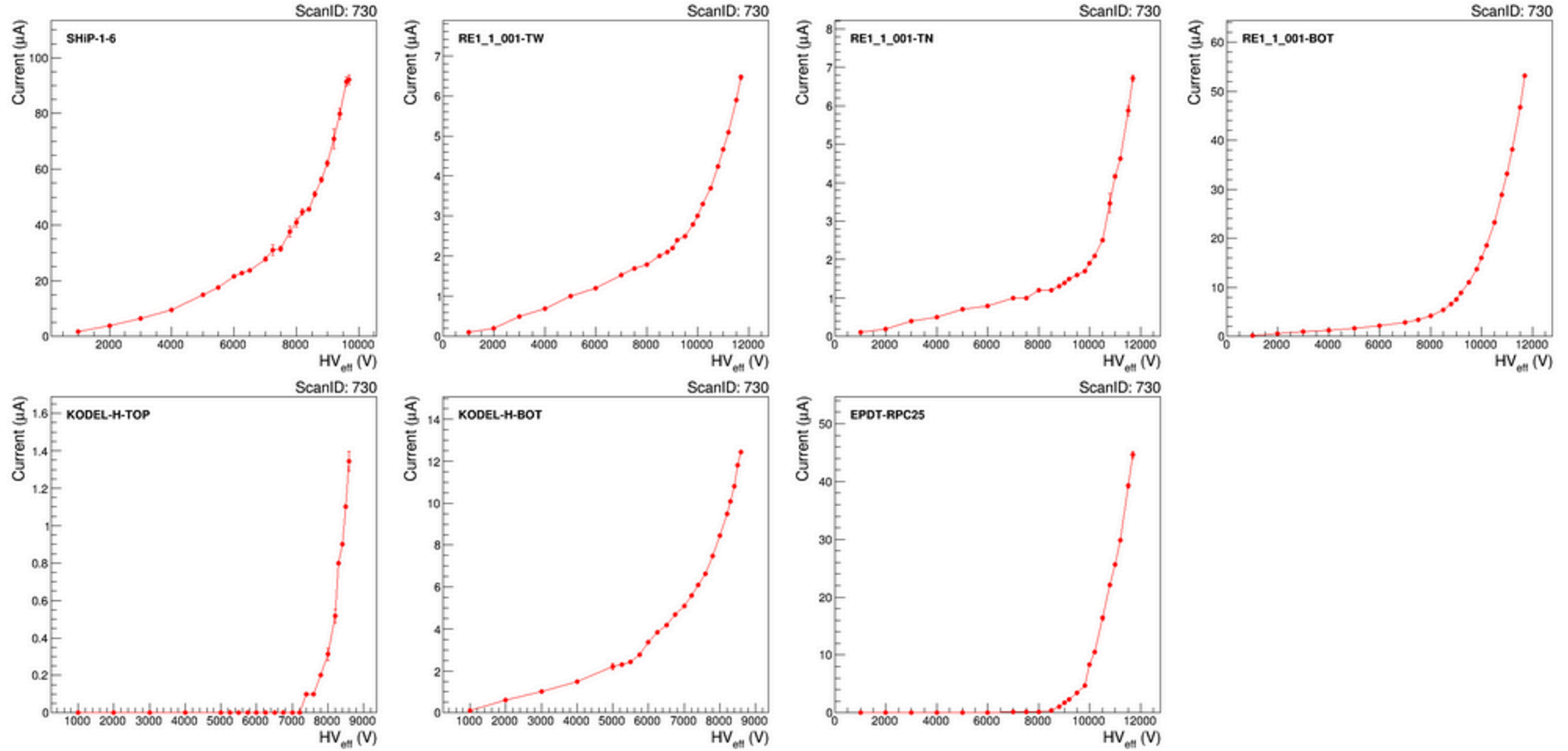| Shfter(s)	Marco & Barbara	Marco & Barbara	Marco & Barbara	Marco & Barbara	Marco & Barbara	Marco & Barbara	Marco & Barbara	Marco & Barbara
LOGGING	28/03/2024	29/03/2024	30/03/2024	31/03/2024	01/04/2024	02/04/2024	03/04/2024	04/04/2024
Logger status	ok	ok	ok	ok	ok	ok	ok	ok
WebDCS status	ok	ok	ok	ok	ok	ok	ok	ok
HV data is logged	ok	ok	ok	ok	ok	ok	ok	ok
k that the heart icon on the panels is green	ok	ok	ok	ok	ok	ok	ok	ok
MIXER								
Gas mixture	ECO2	ECO2	ECO2	ECO2	ECO2	ECO2	ECO2	ECO2
Check gas mixture percentage iC4H10	4	4	4	4	4	4	4	4
Check gas mixture percentage CO2	60	60	60	60	60	60	60	60
Check gas mixture percentage HFO	35	35	35	35	35	35	35	35
Check gas mixture percentage SF6	1	1	1	1	1	1	1	1
Total gas flow	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
HFO used	730	826	885	972	1060	1150	1250	1350
HUMIDIFIER								
By pass valve status:								
Humidifer Wet MFC:	13.02	12.99	12.97	12.9	12.9	12.93	12.97	12.94
Dew point:	2.73	3.85	3.63	2.67	2.42	2.33	2.73	3.1
GENERAL								
Upstream ABS:	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Detectors in front of setup:	https://rpcecogas.web.cern.ch/rpcecogaselog/496							
Bunker pressure:	941.29	938.36	938.27	938.79	944	958.08	955.61	961.48
Bunker temperature:	20.95	20.91	20.91	20.89	20.87	20.84	20.89	20.86
ALICE Hvapp	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
ATLAS Hvapp	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SHiP Hvapp	8.44	8.41	8.41	8.42	8.46	8.56	8.54	8.58
CMS Hvapp	10.16	10.14	10.14	10.14	10.19	10.31	10.29	10.34
EPDT Hvapp	8.63	8.61	8.61	8.61	8.65	8.75	8.73	8.78
Bari 1.0mm Hvapp	//	//	//	//	//	//	//	//
Kodel H HVapp	7.38	7.36	7.36	7.37	7.4	7.49	7.47	7.51
ALICE currents	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
ATLAS currents	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SHiP currents	110	112.2	110.4	107.1	107	110.5	121.7	99.8
CMS currents (TN-TW-BOT)	7.6 - 4.5 - 29.5	7.6 - 4.5 - 29.5	7.4 - 4.4 - 29.2	7.4 - 4.4 - 29.1	7.4-4.4-29.1	7.3 - 4.4 - 29.2	7.4 - 4.4 - 29.4	6.5 - 4.3 - 28.2
EPDT currents	5.1	6.1	4.9	4.88	4.8	4.8	4.9	4.8
Bari 1.0mm currents (TOP-BOTTOM)	//	//	//	//	//	//	//	//
Kodel H currents	12.8 - 18.9	12.8 - 18.7	12.6 - 18.6	12.55 - 18.4	12.5 - 18.5	12.6 - 18.7	12.95 - 18.75	7.7 - 14.0

Wednesday 3rd April
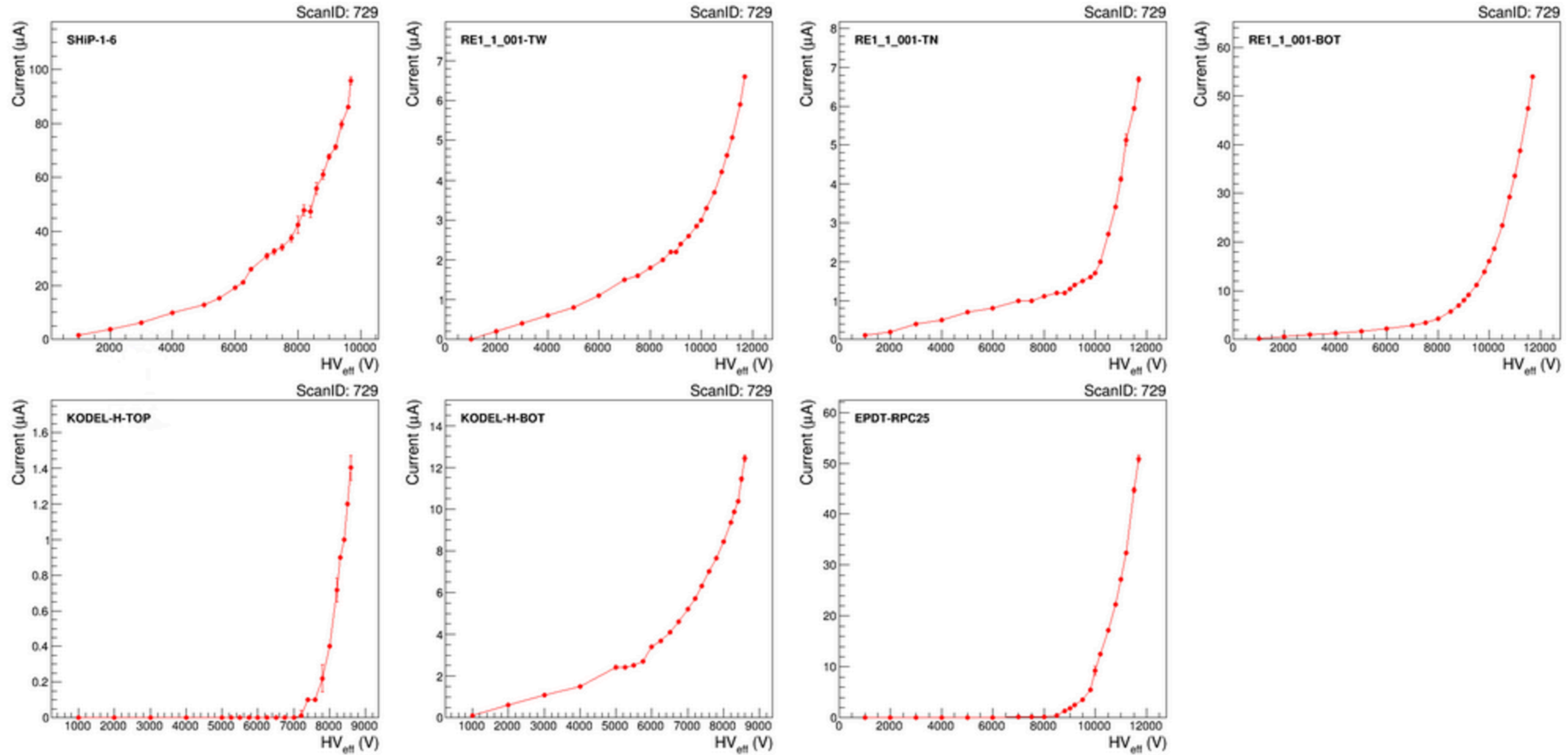
Data logger crashed when we started this run (just this time during the whole shift)
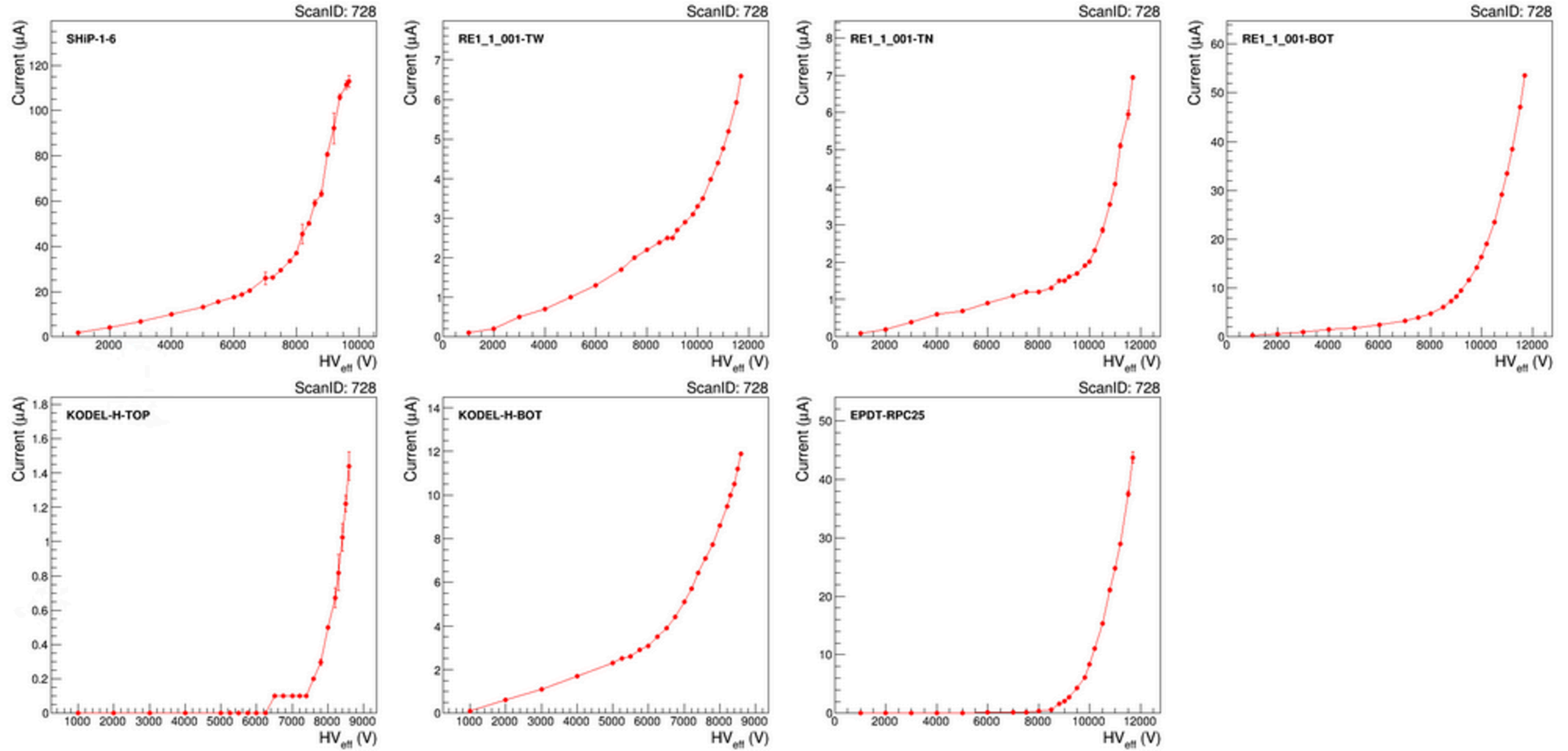HV scans 729 and 730 very similar each other

HV scan 730
Wednesday 3rd April

HV scans 729 and 730 very similar each other

No huge differences observed

Ongoing stability run 210

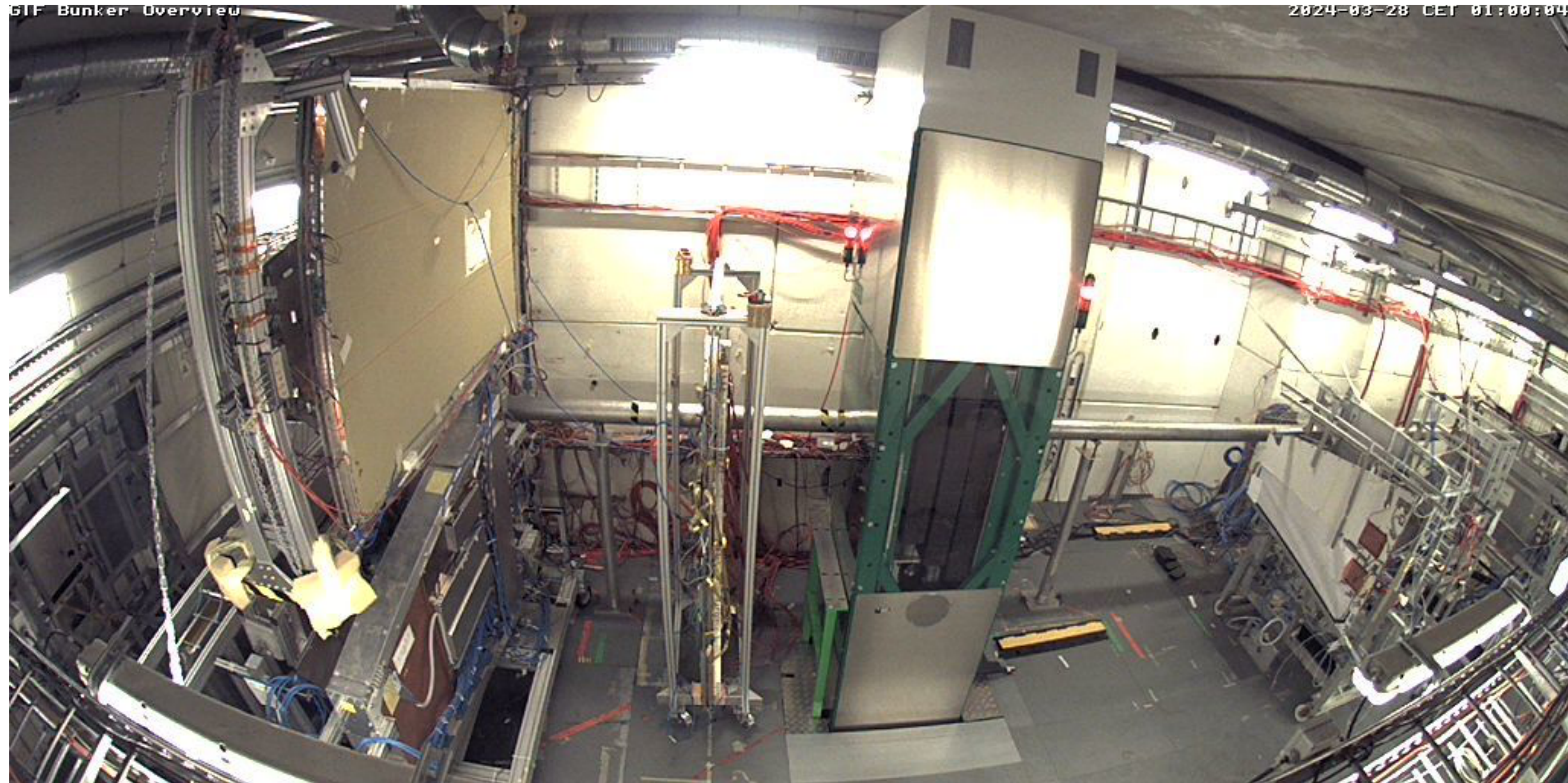- Started yesterday evening around 8 pm

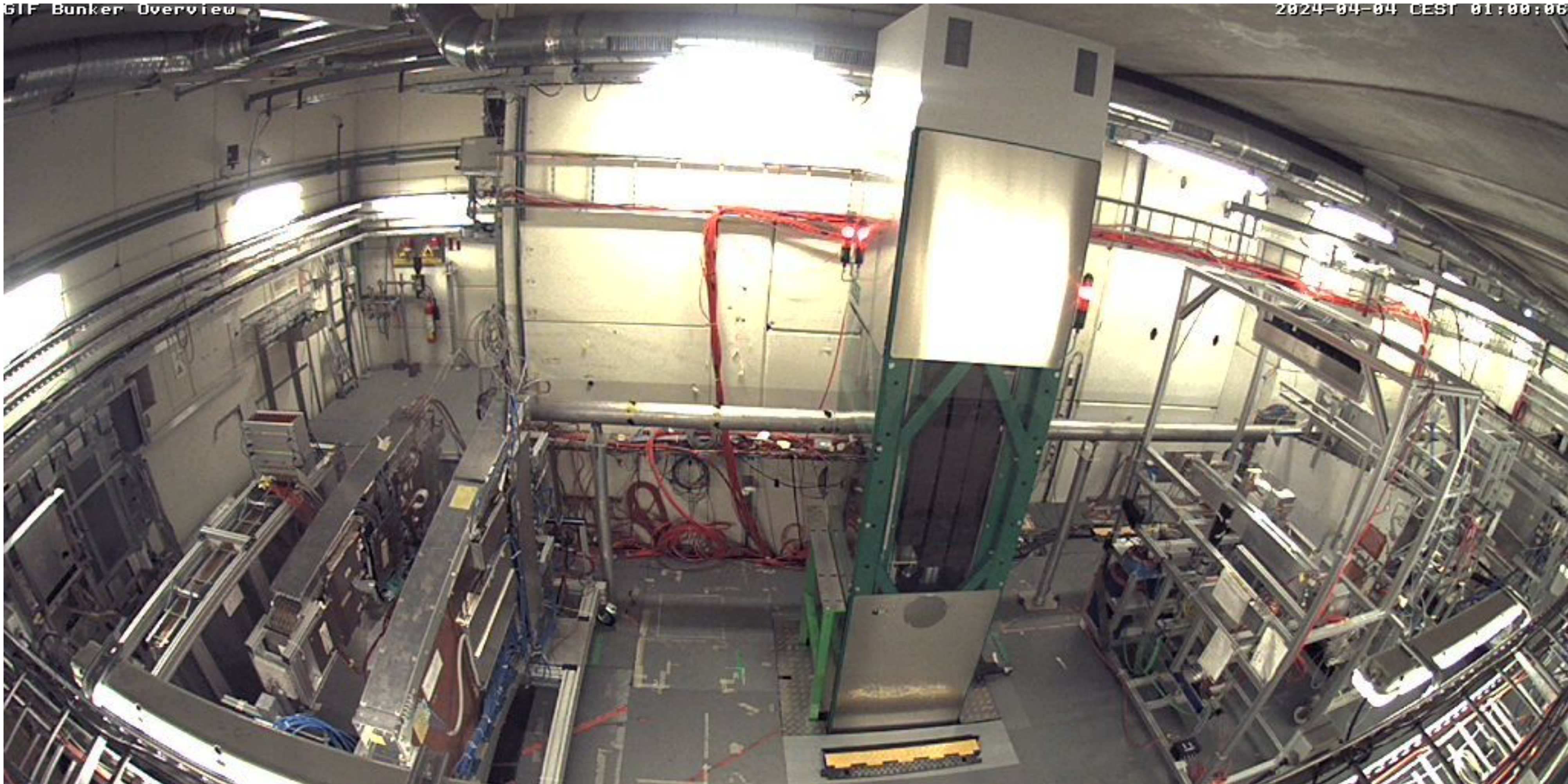# Currents in the new stability run (210)
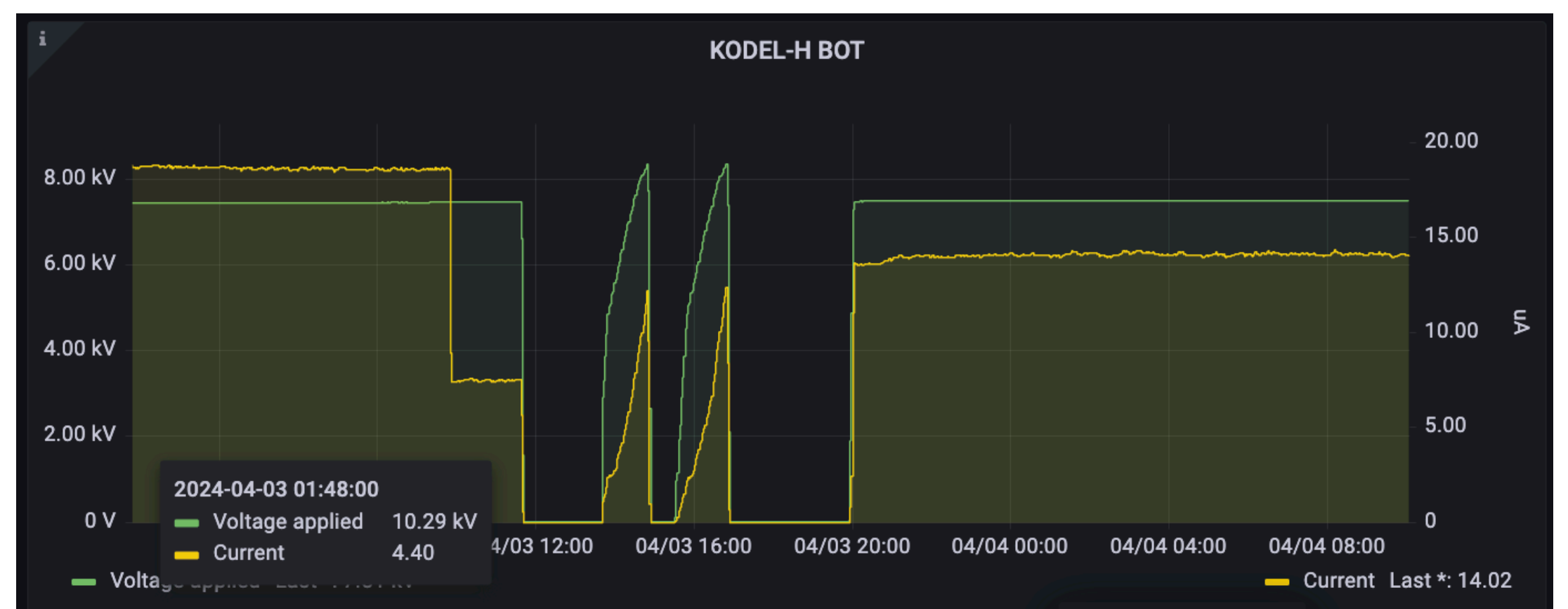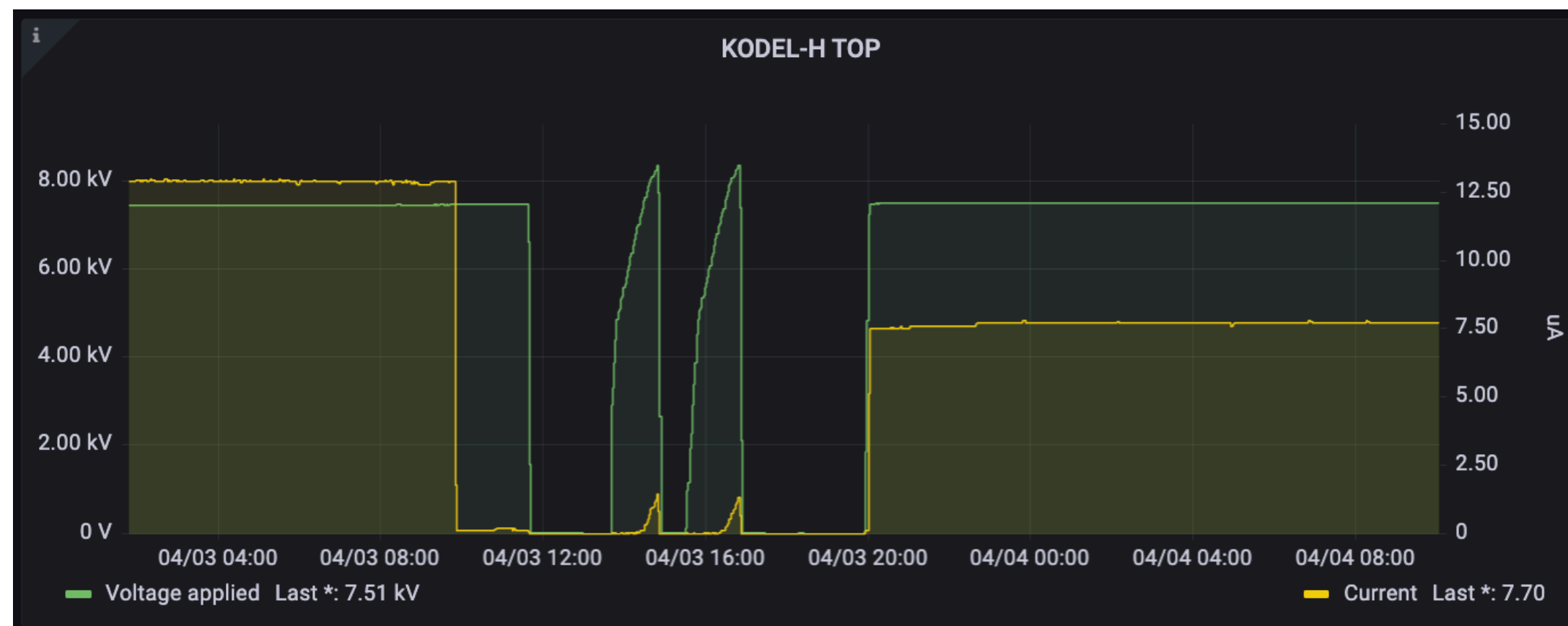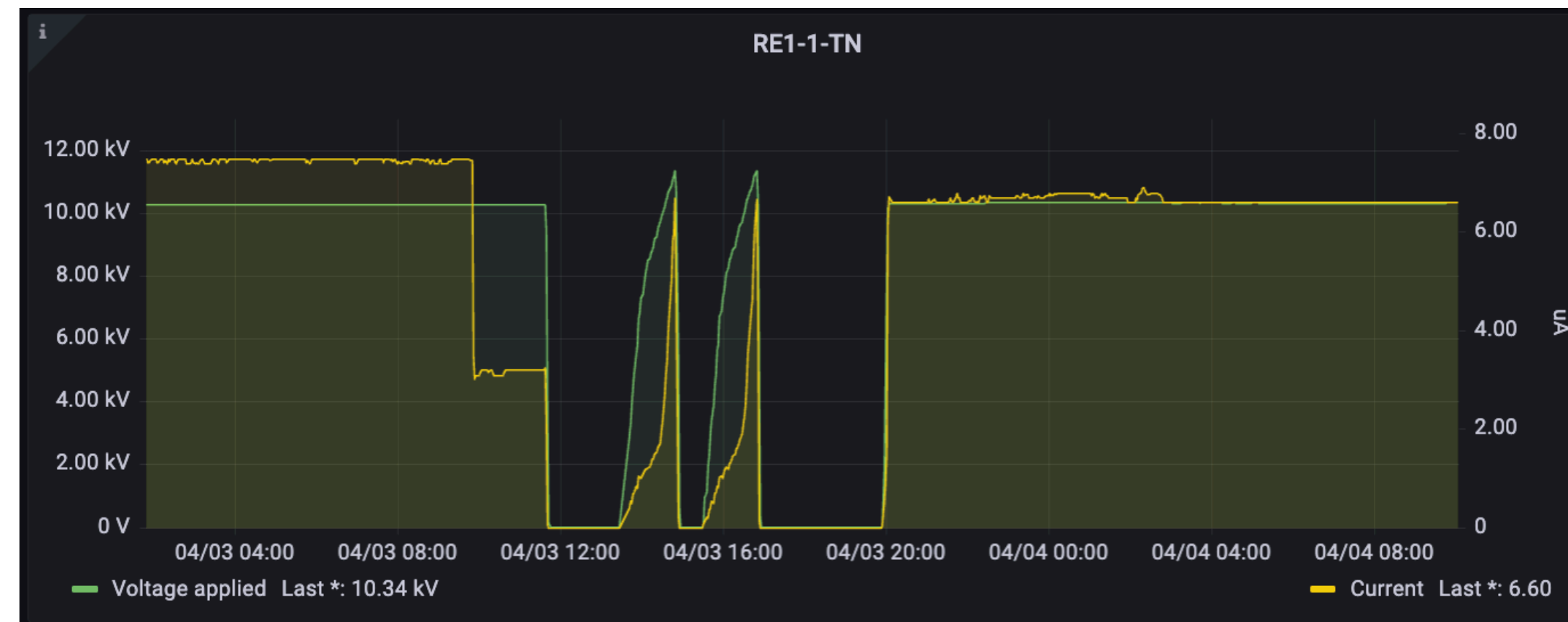
- Observed a reduction of current for some detectors (RE1-1 TN, SHIP, KODEL-H-TOP, KODEL-H-BOT)
  - HV, source attenuation filter, gas flow, gas mixture not changed
  - Maybe due to a new setup in front of the source?

GIF++ setups on 28th March

GIF++ setups on 4th April

i0 settings

	A	B	C	D
1	**Last update 2024 February 22**			
2				
3	**Chamber**	**Working voltage (V)**	**Standby voltage (V)**	**i0 (uA)**
4	ALICE-2-0	To be checked when included again		
5	ATLAS	To be checked when included again		
6	EPDT-RPC25	9000	6500	20
7	SHiP-1-6	8800	5000	200
8	RE1_1_001-BOT	10600	6500	200
9	RE1_1_001-TN	10600	6500	200
10	RE1_1_001-TW	10600	6500	200
11	KODEL-H-BOT	7700	5000	50
12	KODEL-H-TOP	7700	5000	50
13				
14				

RPC   Stability parameters   +

Stability - Run ID 0209

Summary   Run config   Log file   Monitoring   Plots   [EPDT-RPC25 ▼]

Chamber/gap	Enabled	Working voltage (V)	Standby voltage (V)	i0 (uA)	Attenuator standby
EPDT-RPC25	☑	9000	6500	200	1 (111) ▼
SHiP-1-6	☑	8800	5000	300	1 (111) ▼
RE1_1_001-BOT	☑	10600	6500	60	1 (111) ▼
RE1_1_001-TN	☑	10600	6500	50	1 (111) ▼
RE1_1_001-TW	☑	10600	6500	50	1 (111) ▼
KODEL-H-BOT	☑	7700	5000	50	1 (111) ▼
KODEL-H-TOP	☑	7700	5000	50	1 (111) ▼

- We used the i0 settings taken from the checklist shared file

- But they are different w.r.t. the last stability run 209

- Which ones are correct? Can we keep updated the settings in the shared file?

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