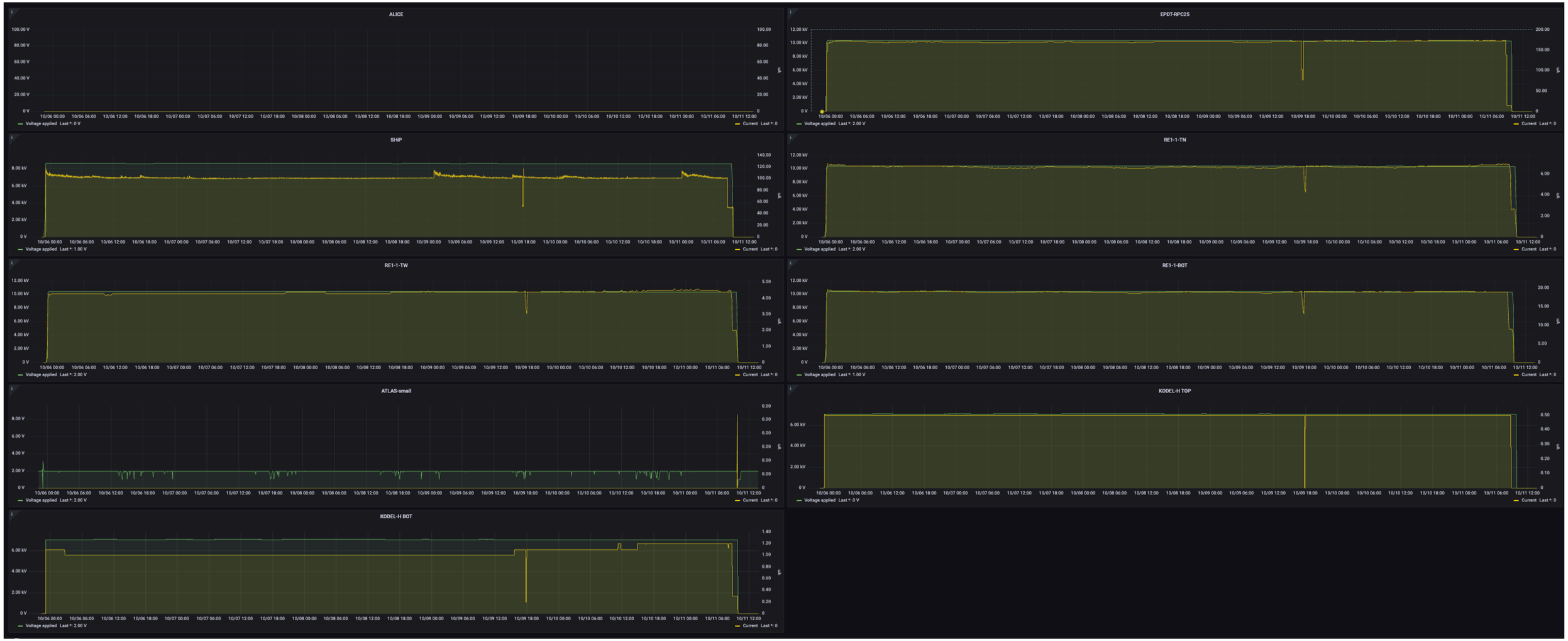
RPC eco-gas at GIF++
Weekly report

Barbara Liberti and Marco Sessa
October 12th, 2023

Stability run 183

- **Stability run 183** started on Thursday October 5th around 23:15 (source was off until late evening) and stopped on Wednesday October 11th around 9:45
- All chambers included, except ATLAS (temporarily disconnected from the setup) and ALICE
- Very smooth run —> very small variations of dew point outside the range 4 °C +/- 1 °C —> no actions taken



SHIP current rise

- Rises of current observed for SHIP chamber
- The current goes back slowly to the original value, but it is noisier starting from October 9th
- https://rpcecogas.web.cern.ch/rpcecogaselog/426

Source OFF HV scan from Grafana

- HV scans 683 and 684
- All included, except ATLAS. Also ALICE included in the HV scan with source OFF (requested by Luca)
- Currents comparable between the two scans -> only EPDT shows a jump of current: 28 µA -> 36 µA

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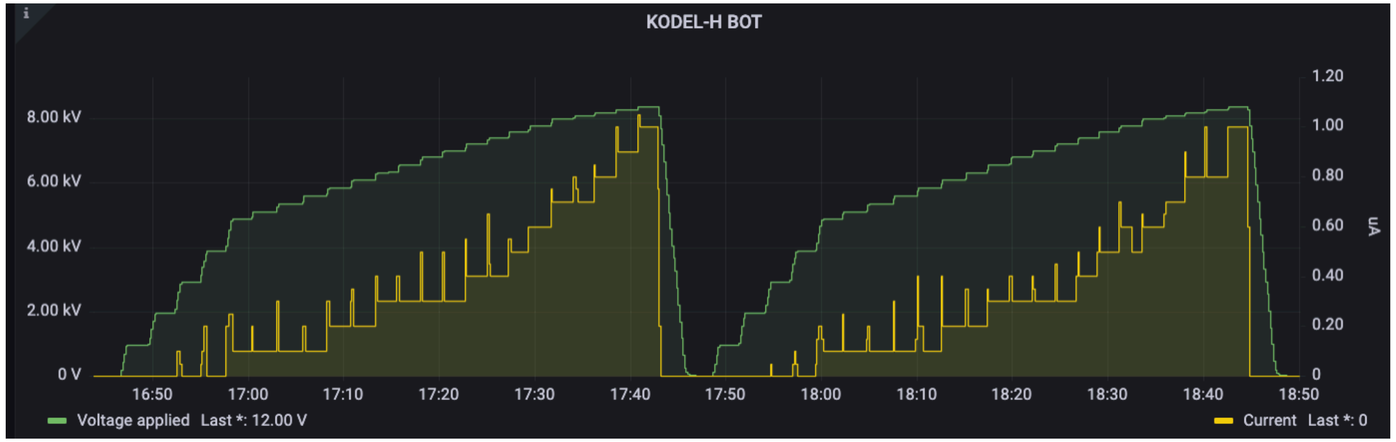
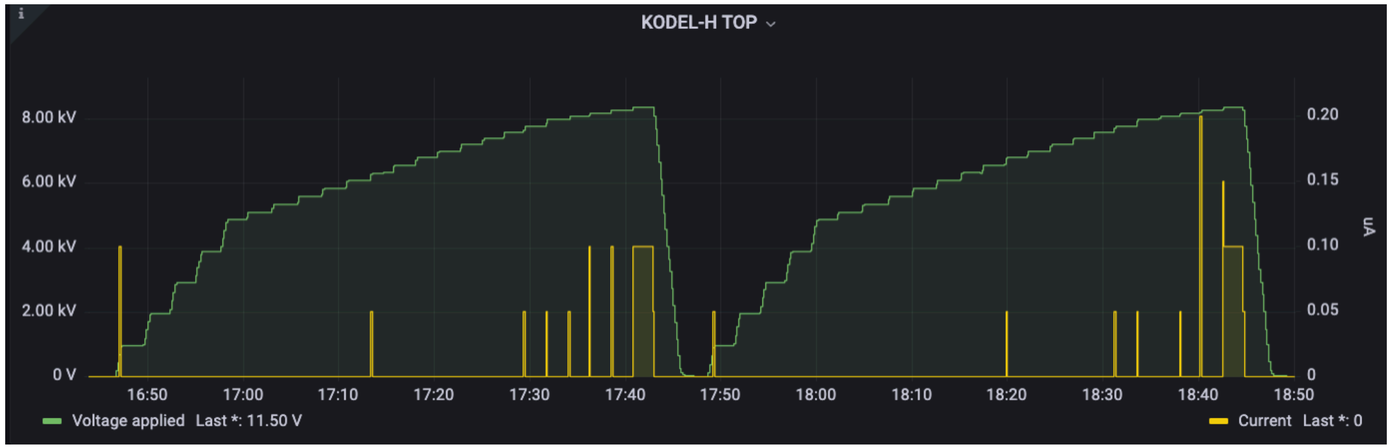
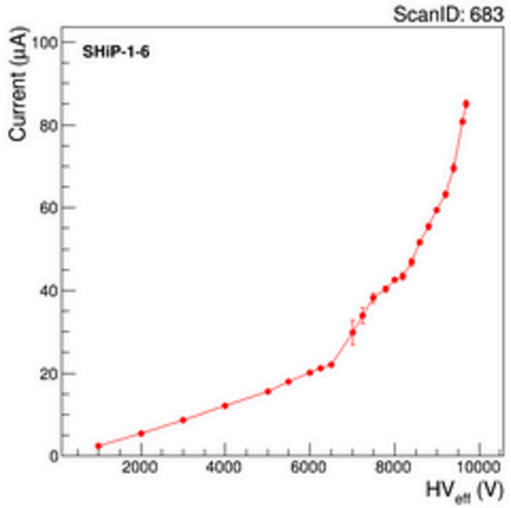
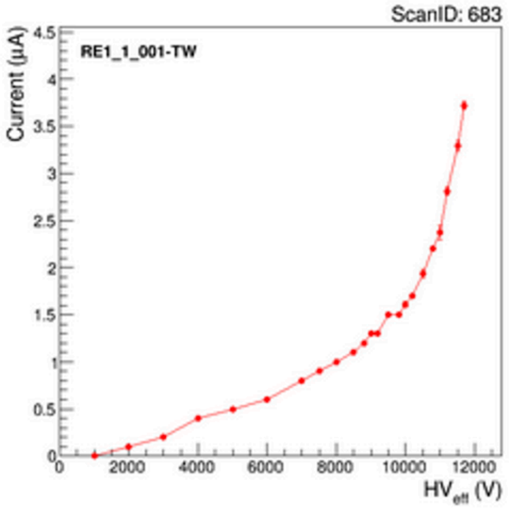
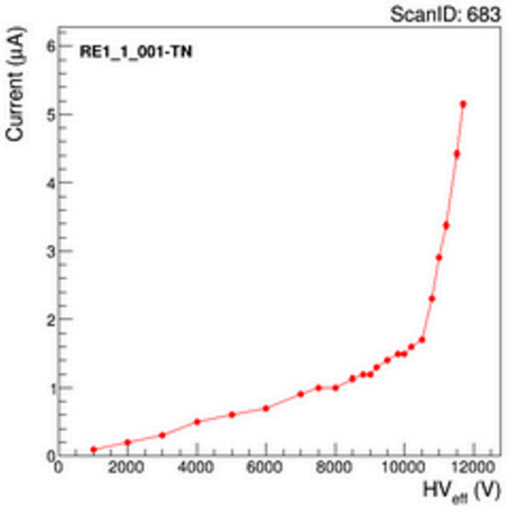


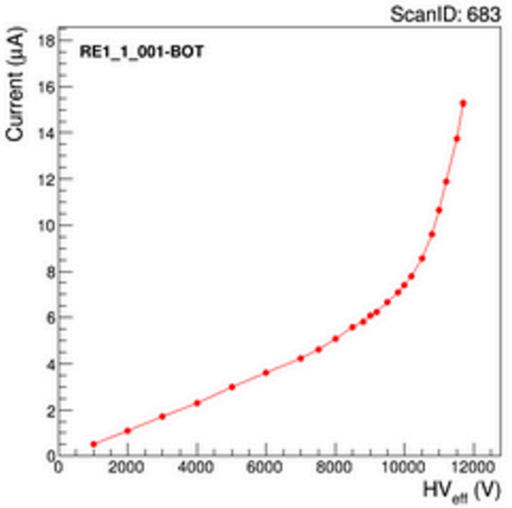


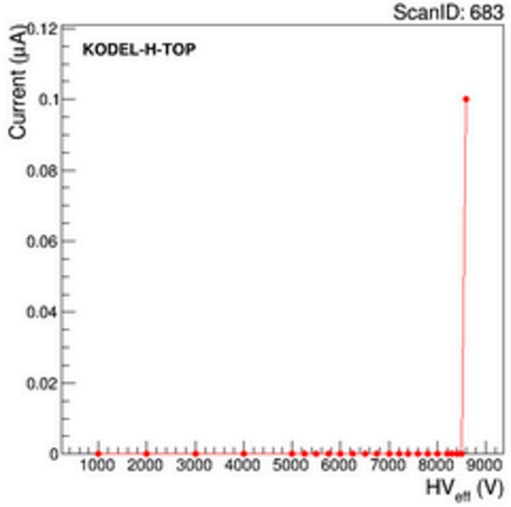
Source OFF HV scan 683

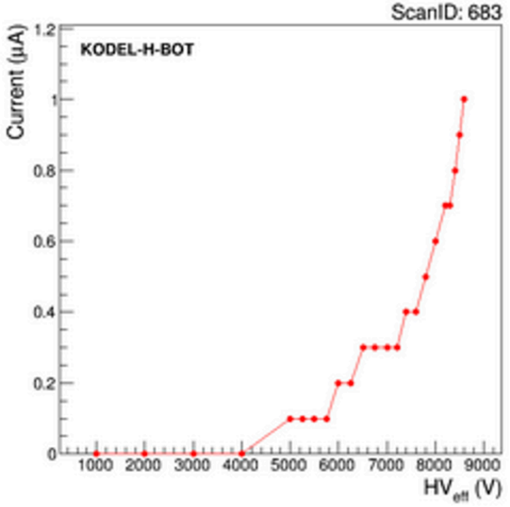


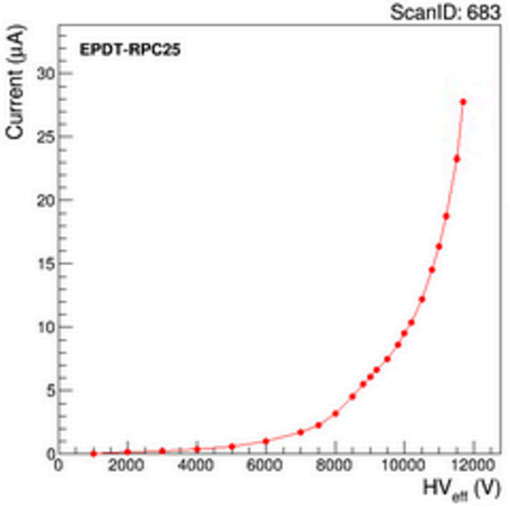


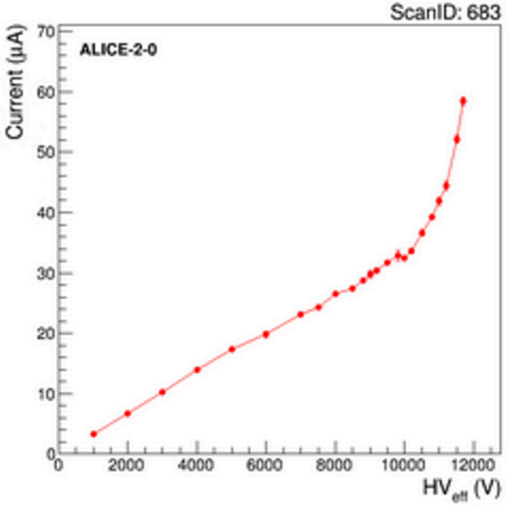




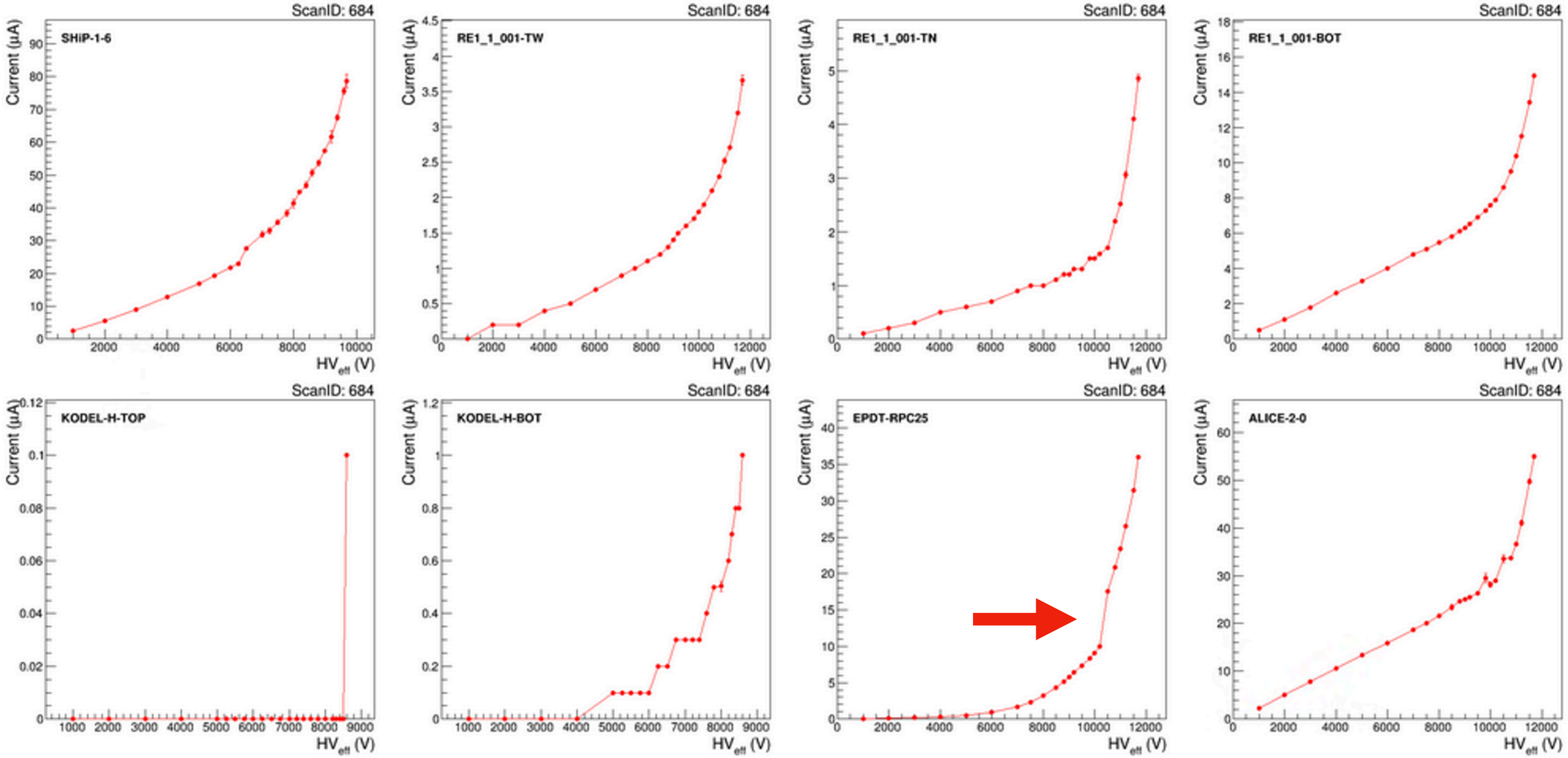






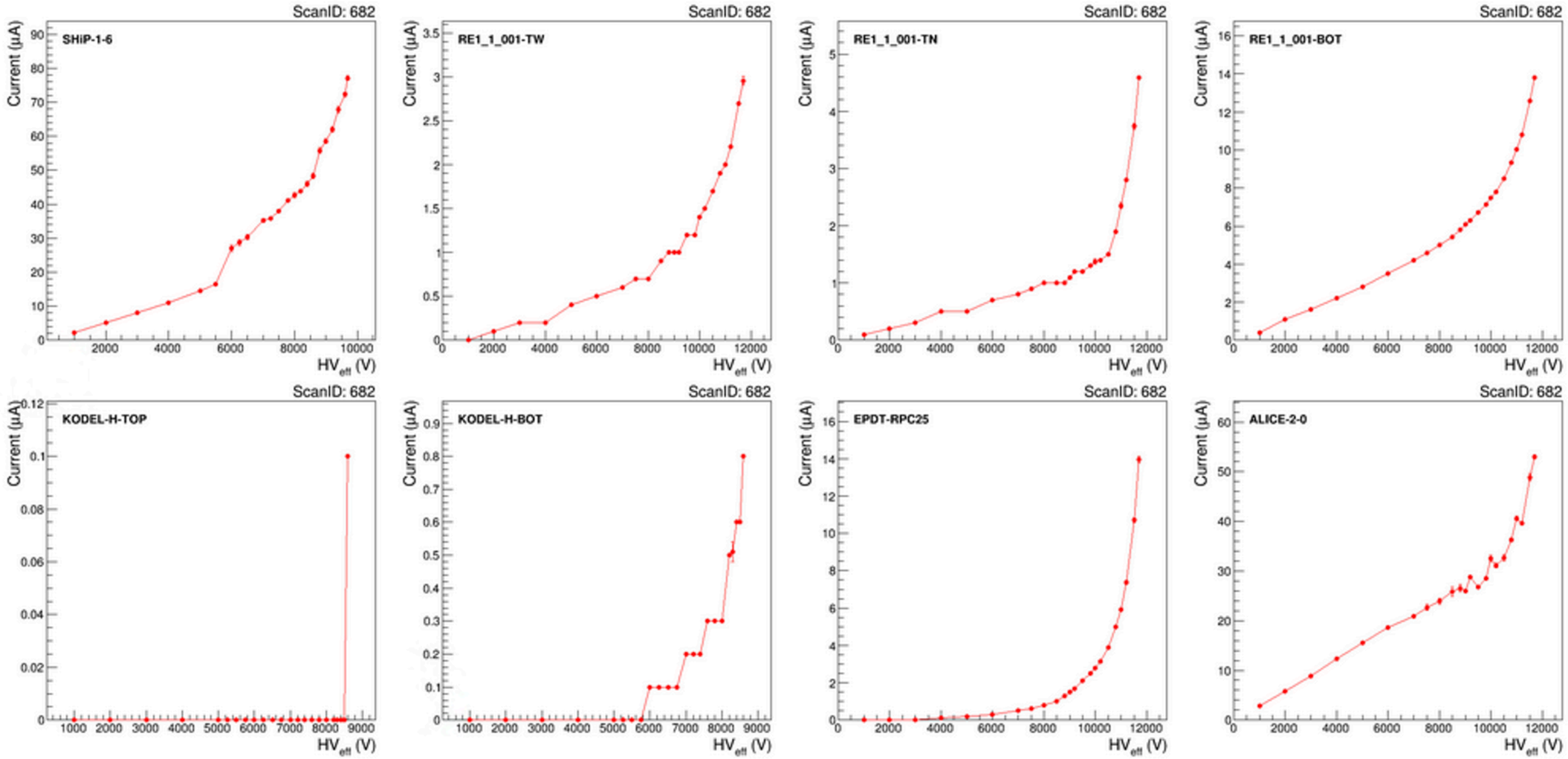


Source OFF HV scan 684



- Same considerations as in slide 4 -> currents comparable between the two runs, only a jump observed for EPDT

Last week HV scan n. 682 (for comparison)

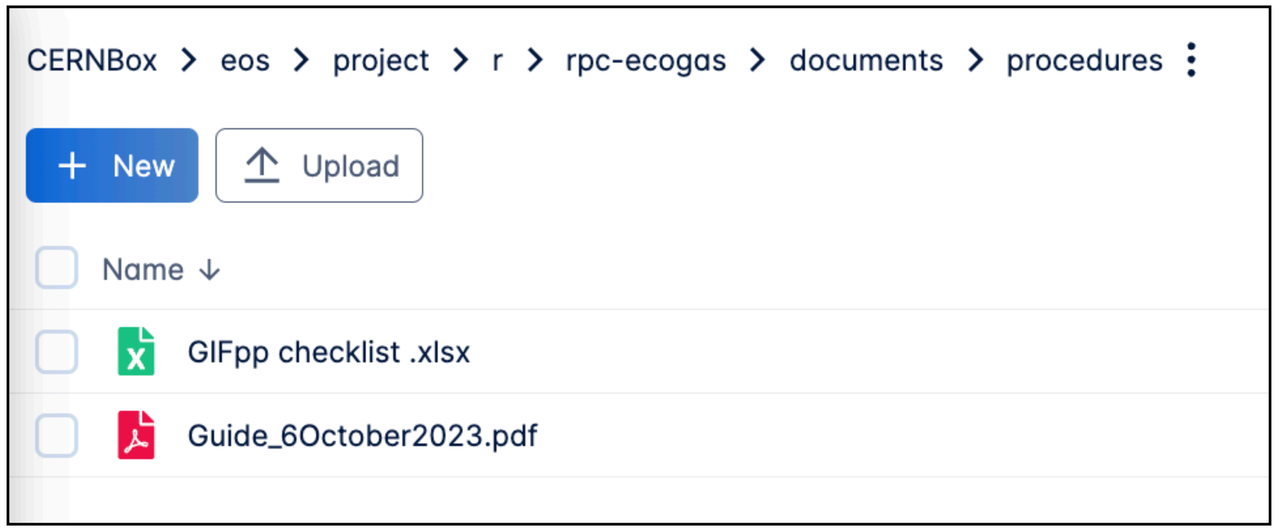


- Slightly higher currents observed for ALL chambers in runs 683 and 684 w.r.t. the 682 of the week before
- For EPDT the increase of current is much higher: 14 µA in run 682 —> 28 µA and 36 µA in runs 683 and 684 respectively

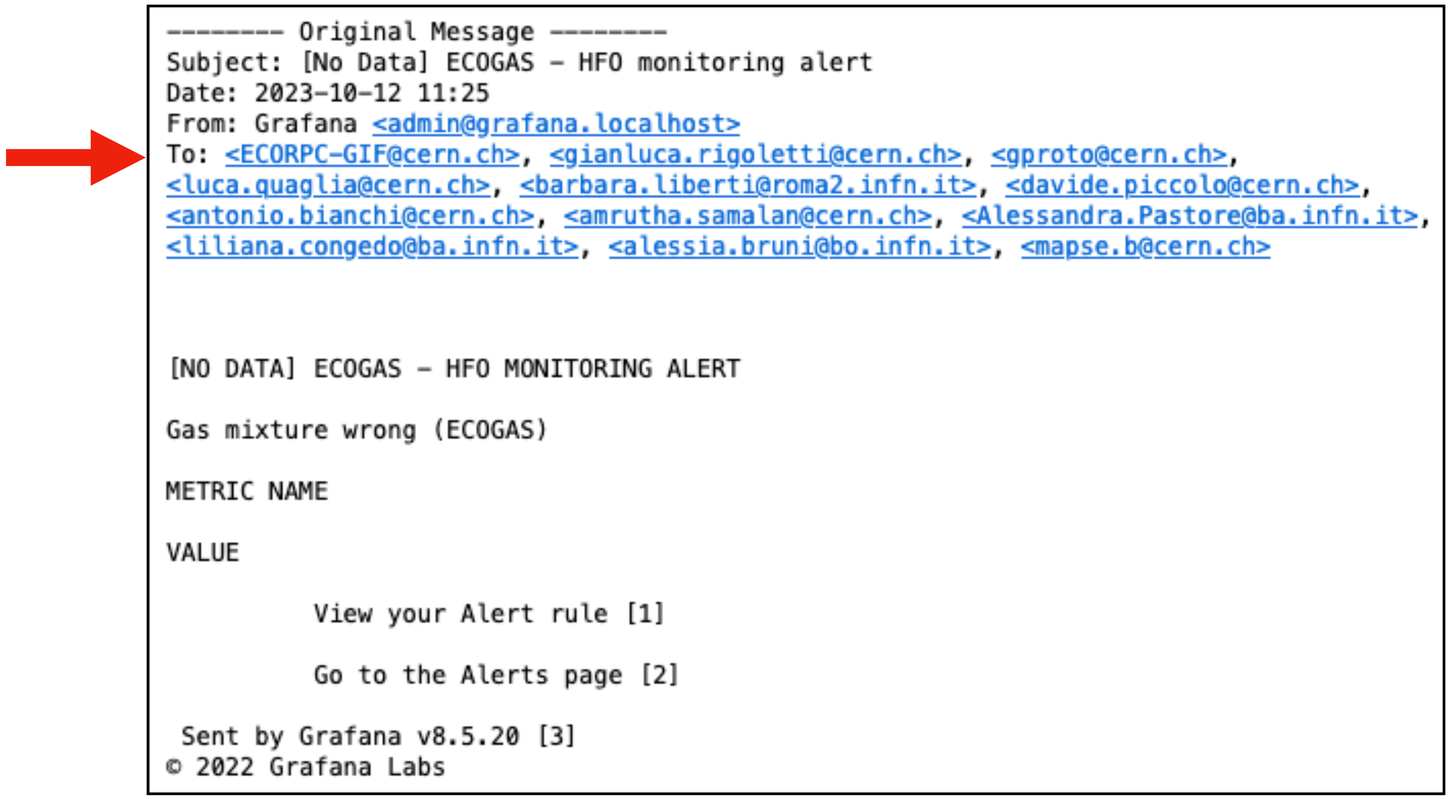
Miscellanea

- Data logger crashed three times during last week
  - https://rpcecogas.web.cern.ch/rpcecogaselog/422
  - https://rpcecogas.web.cern.ch/rpcecogaselog/423
  - PC pc-epdt-ecogas.cern.ch rebooted to recover after the second crash
  - Thanks Luca for the help with the restart of MFC viewers and Grafana gas flux monitor (for individual chambers)!

- Guide updated by Luca with new instructions for Grafana gas flux monitor (for individual chambers) and Dew Point monitor
  - Guide uploaded to cernbox under /documents/procedures/



Miscellanea



-------- Original Message --------
Subject: [No Data] ECOGAS - HFO monitoring alert
Date: 2023-10-12 11:25
From: Grafana <admin@grafana.localhost>
To: <ECORPC-GIF@cern.ch>, <gianluca.rigoletti@cern.ch>, <gproto@cern.ch>,
<luca.quaglia@cern.ch>, <barbara.liberti@roma2.infn.it>, <davide.piccolo@cern.ch>,
<antonio.bianchi@cern.ch>, <amrutha.samalan@cern.ch>, <Alessandra.Pastore@ba.infn.it>,
<liliana.congedo@ba.infn.it>, <alessia.bruni@bo.infn.it>, <mapse.b@cern.ch>

[NO DATA] ECOGAS - HFO MONITORING ALERT

Gas mixture wrong (ECOGAS)

METRIC NAME

VALUE

View your Alert rule [1]

Go to the Alerts page [2]

Sent by Grafana v8.5.20 [3]
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- I (Marco Sessa) noticed I don't receive these messages from Grafana about HFO alerts, but the mailing list ecorpc-gif@cern.ch is there. Do you know why?

Instructions for next shifter

- ATLAS and ALICE chambers still excluded from the stability run (ALICE included only for HV scan with source off)
- EPDT, RE1-1, SHiP, KODEL-H to be included
- Reference run for stability run -> run 183 —> ATLAS and ALICE out
- Reference run for HV scan —> run 684 —> all in, ATLAS out

Stability - Run ID 0183

Chamber/gap	Enabled	Working voltage (V)	Standby voltage (V)	i0 (uA)	Attenuator standby
EPDT-RPC25	☑	10600	6500	230	1 (111)
SHiP-1-6	☑	8800	5000	200	1 (111)
RE1_1_001-BOT	☑	10600	6500	200	1 (111)
RE1_1_001-TN	☑	10600	6500	200	1 (111)
RE1_1_001-TW	☑	10600	6500	200	1 (111)
KODEL-H-BOT	☑	7200	5000	100	1 (111)
KODEL-H-TOP	☑	7200	5000	100	1 (111)

- **New stability run not started yet, since the source is still OFF**

Back-up slides

Checklist

	DC	DD	DE	DF	DG	DH
	DATE:	**DATE:**	**DATE:**	**DATE:**	**DATE:**	**DATE:**
Shfter(s)	Barbara & Marco	Barbara & Marco	Barbara & Marco	Barbara & Marco	Barbara & Marco	Barbara & Marco
	06/10/2023	07/10/2023	08/10/2023	09/10/2023	10/10/2023	11/10/2023
Logger status	ok	ok	ok	ok	ok	ok
WebDCS status	ok	ok	ok	ok	ok	ok
HV data is logged	ok	ok	ok	ok	ok	ok
the panels is green	ok	ok	ok	ok	ok	ok
Gas mixture	ECO2	ECO2	ECO2	ECO2	ECO2	ECO2
percentage iC4H10	4	4	4	4	4	4
re percentage CO2	60	60	60	60	60	60
ıre percentage HFO	35	35	35	35	35	35
ure percentage SF6	1	1	1	1	1	1
Total gas flow	13.3	13.3	13.3	13.3	13.3	13.3
HFO used	1260 L	1380 L	1480 L	1560 L	1710 L	1830 L
y pass valve status:						
lumidifer Wet MFC:	14	14	14	14	14	14
Dew point:	4.9	5.1	4.9	3.6	5.4	5
Upstream ABS:	ON, 2.2	ON, 2.2	ON, 2.2	ON, 2.2	ON, 2.2	OFF
rs in front of setup:	link	link	link	link	link	link
Bunker pressure:	968.2	969.2	969	969.5	965	
unker temperature:	20.6	20.6	20.6	20.6	20.6	
ALICE Hvapp	OFF	OFF	OFF	OFF	OFF	
ATLAS Hvapp	OFF	OFF	OFF	OFF	OFF	
SHiP Hvapp	8.63	8.64	8.64	8.64	8.61	
CMS Hvapp	10.41	10.41 - 10.42 - 10.41	10.41 - 10.42 - 10-41	10.41 - 10.42 - 10.42	10.38-10.38-10.38	
EPDT Hvapp	10.41	10.41	10.41	10.41	10.38	
Bari 1.0mm Hvapp	/	/	/	/	/	
Kodel H HVapp	7.06	7.07	7.07	7.07	7.04	