

# EPJ plus focus point paper update

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# Overview

- General updates
- Status of data collection
- Preliminary figures
- Conclusions

# General updates

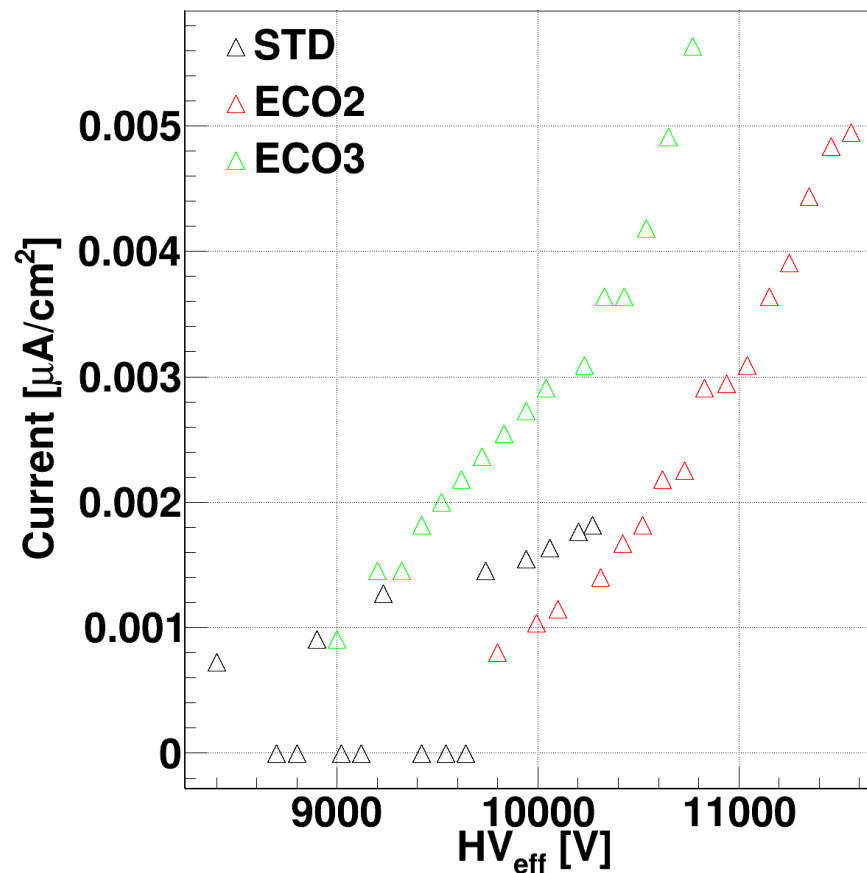
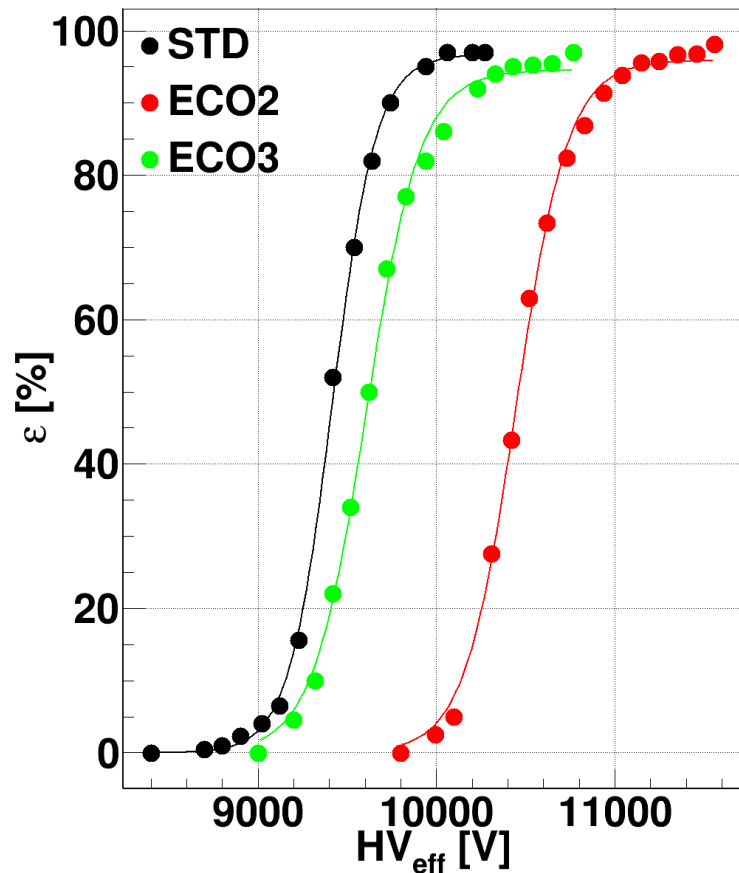
- Got some feedback from the groups and tables are being filled
- Wrt old presentation we decided to add some plots also for the ALICE and EPDT detector for what concerns the 2022 beam tests
  - 1) Prompt charge distribution @ WP for ALICE as well as EPDT for HFO/CO2 scan
  - 2) Streamer probability vs HV for ALICE and EPDT for HFO/CO2 scan
  - 3) Results under irradiation also for the ALICE chamber
- Here we will show some preliminary plots that we could insert in the paper, all comments are welcome

# Dose measurements TB 2022

- Figure to be produced
- Only measurement of dose on trolley 1 for CMS reference but can be used to compare to this year's measurement

# Preliminary figures - 1

- Eff vs HV at source OFF for STD/ECO2/ECO3
  - Current vs HV source OFF for STD/ECO2/ECO3
- missing error on current

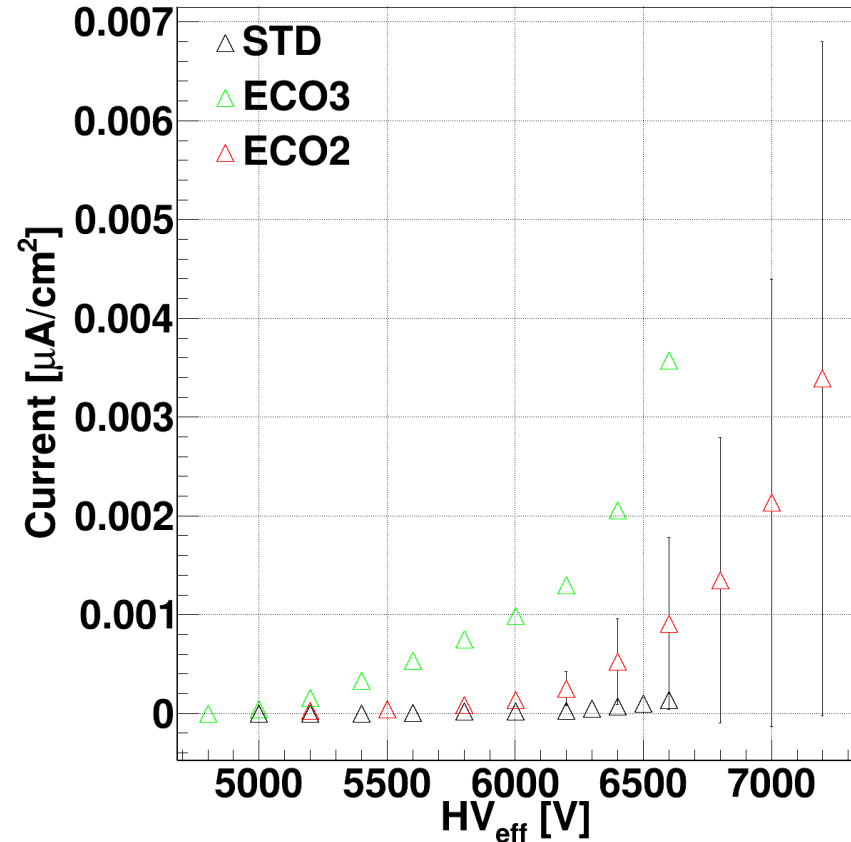
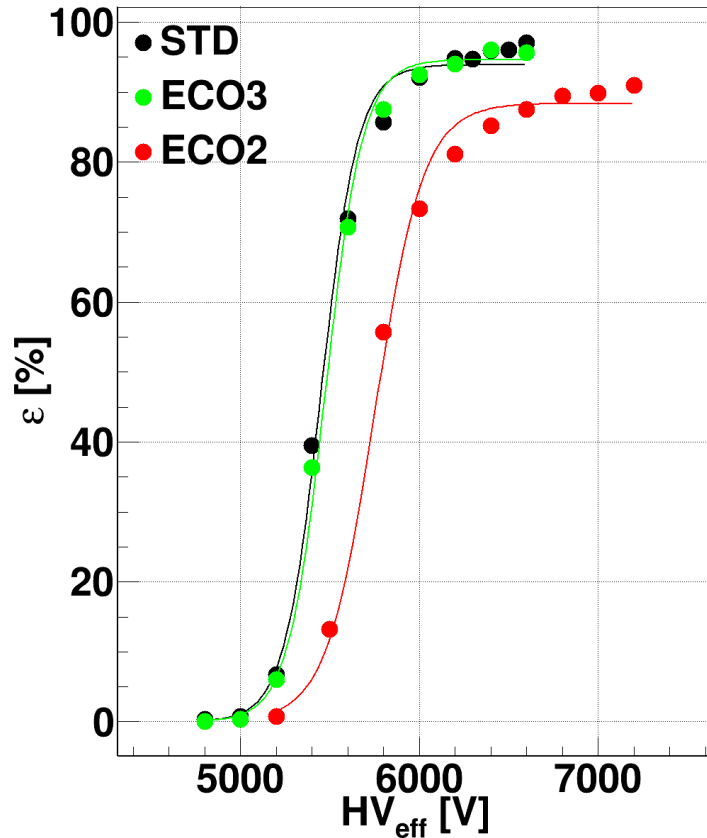


# Preliminary figures - 2

- Eff vs HV at source ON for STD/ECO2/ECO3
- Current vs HV source ON for STD/ECO2/ECO3  
→ data in the process of being filled in the table

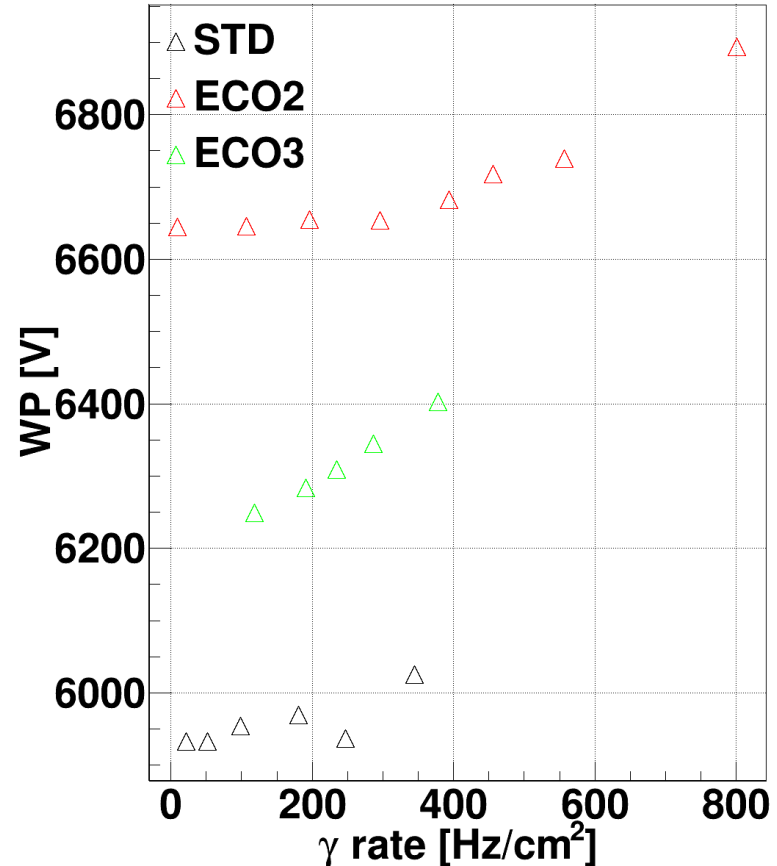
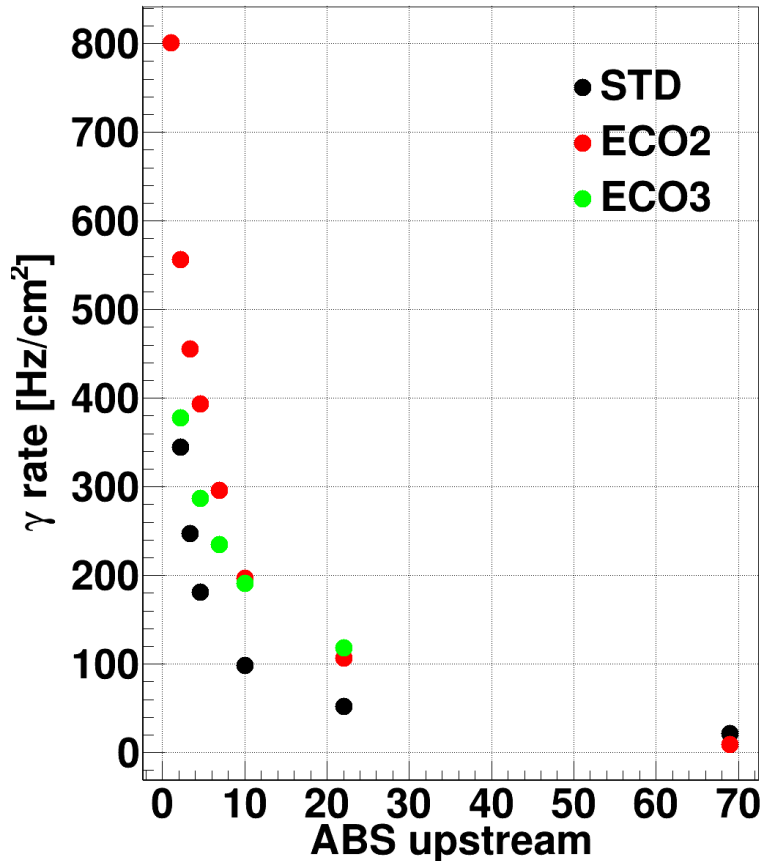
# Preliminary figures - 3

- Eff vs HV at source OFF for STD/ECO2/ECO3
- Current vs HV source OFF for STD/ECO2/ECO3
- missing data from other mixtures from HFO/CO2 scan



# Preliminary figures - 4

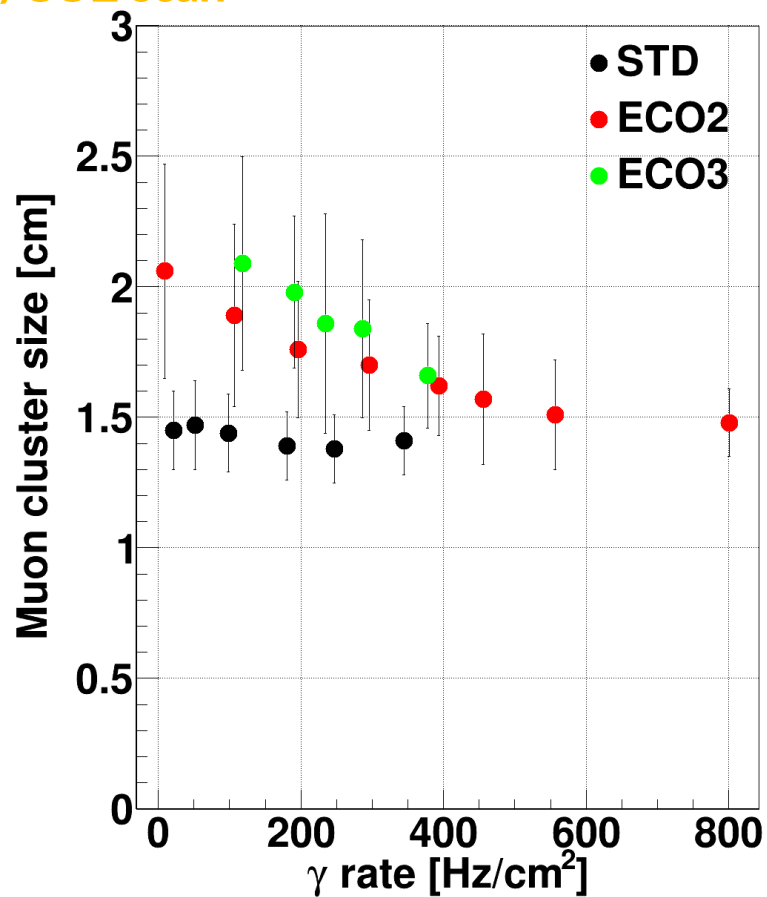
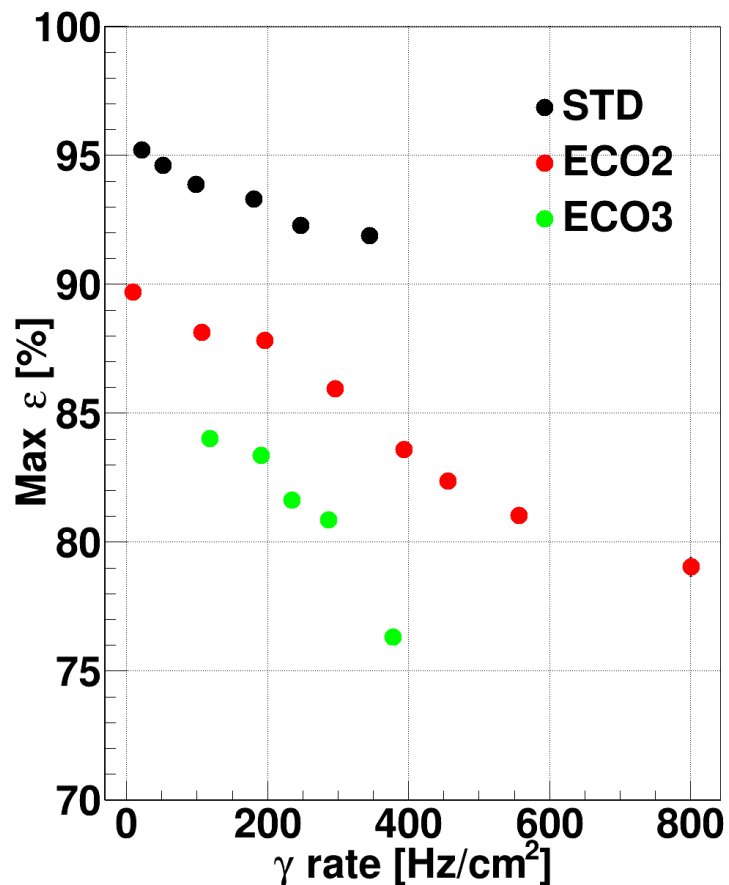
- Gamma rate (at wp) vs ABS for STD/ECO2/ECO3
- WP vs gamma rate for STD/ECO3/ECO3
- missing data from other mixtures from HFO/CO2 scan





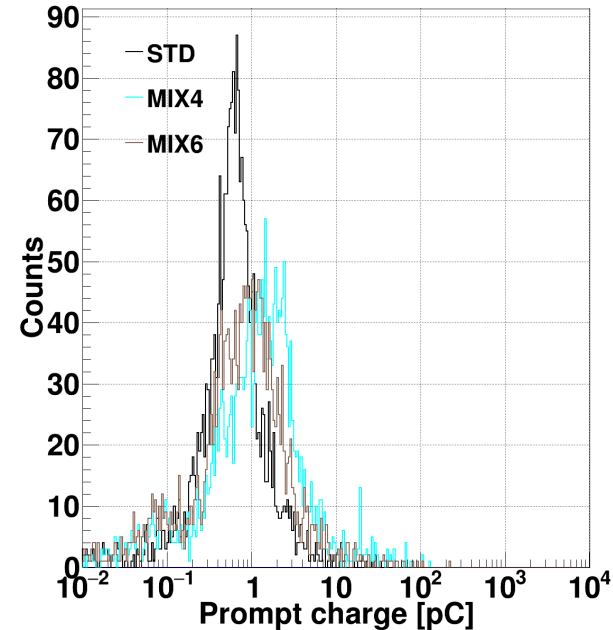
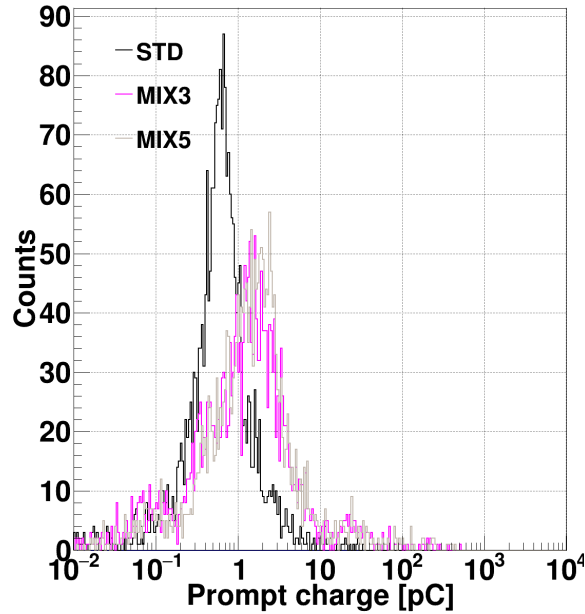
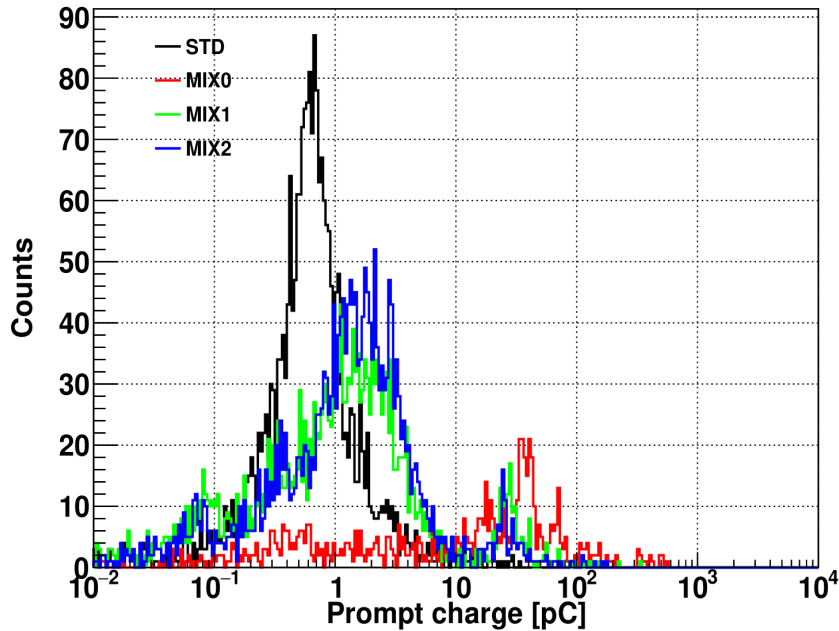
# Preliminary figures - 5

- Max eff vs gamma rate for STD/ECO2/ECO3
  - Muon cs at working point vs gamma rate for STD/ECO3/ECO3
- missing data from other mixtures from HFO/CO<sub>2</sub> scan



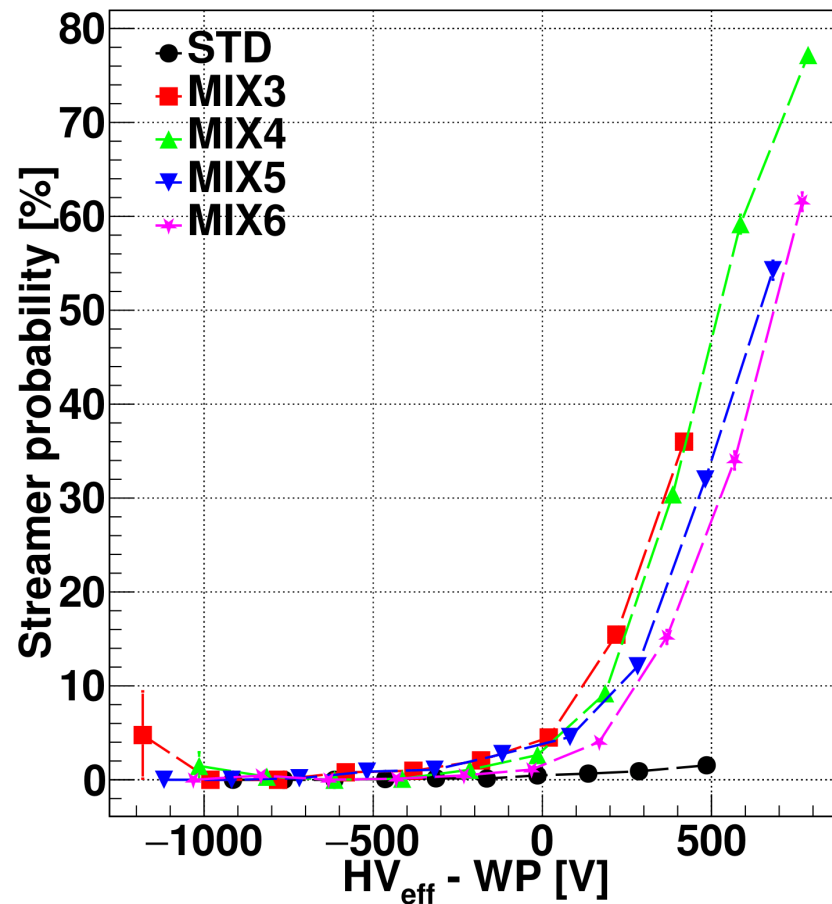
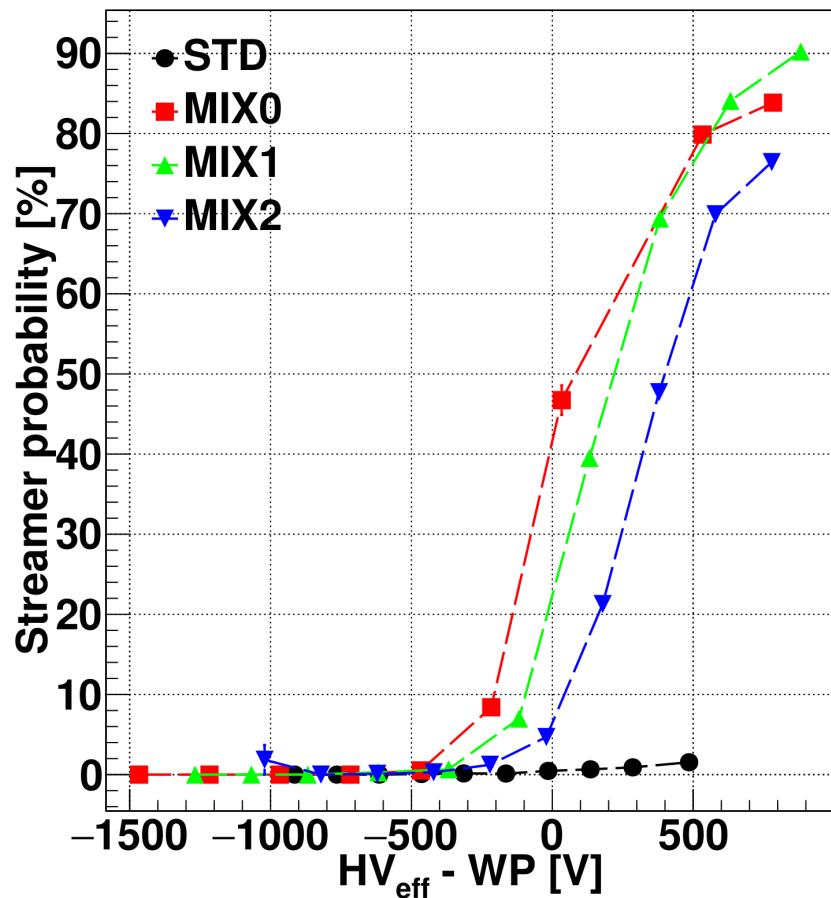
# Preliminary figures - 6

- Prompt charge distributions at source OFF  
→ same figures will be produced for EPDT



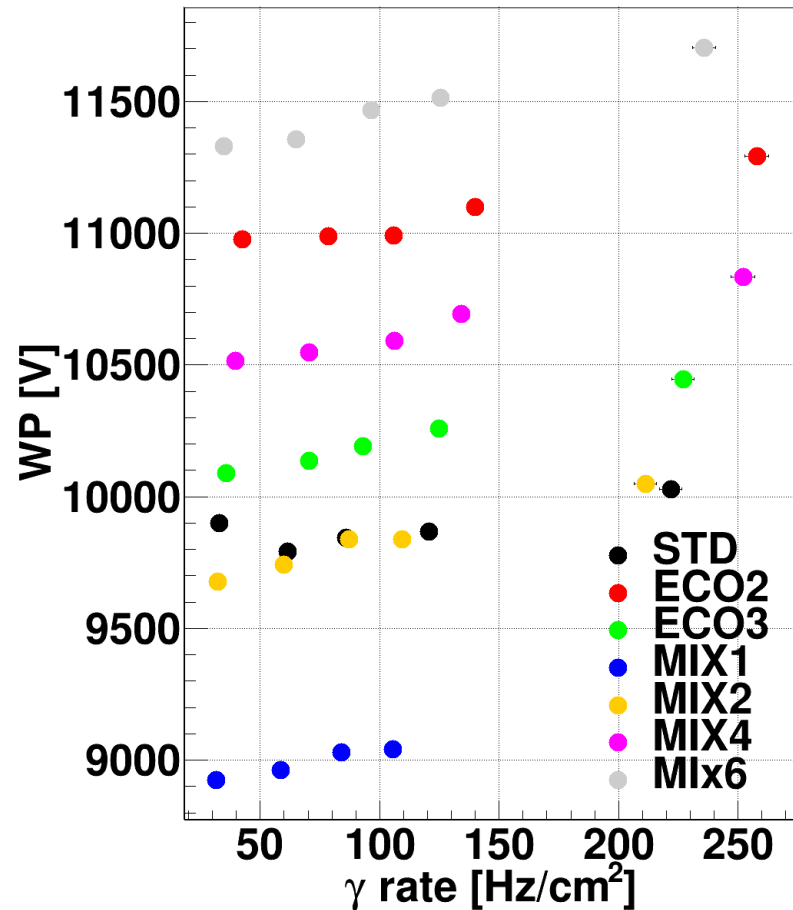
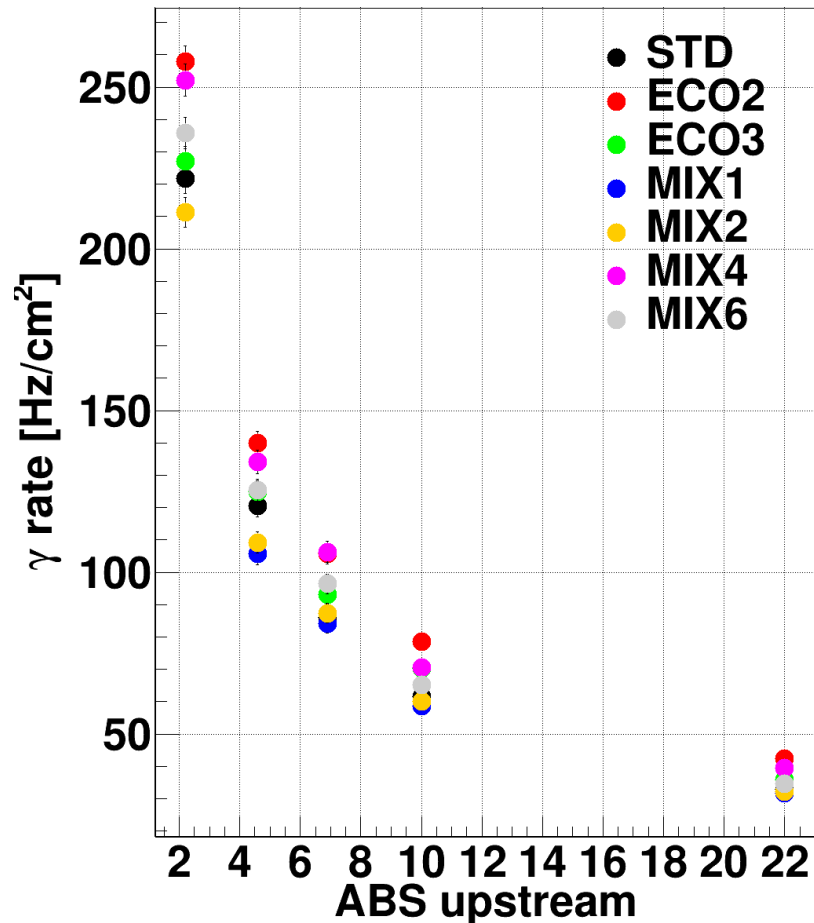
# Preliminary figures - 7

- Streamer probability vs HV for HFO/CO2 scan at source OFF



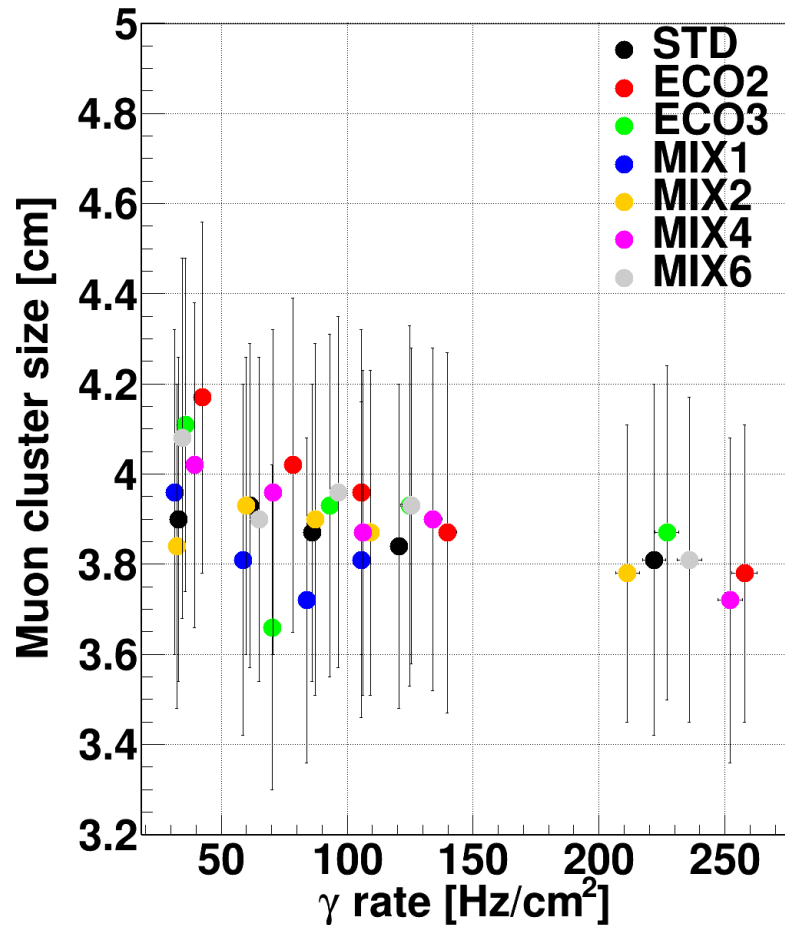
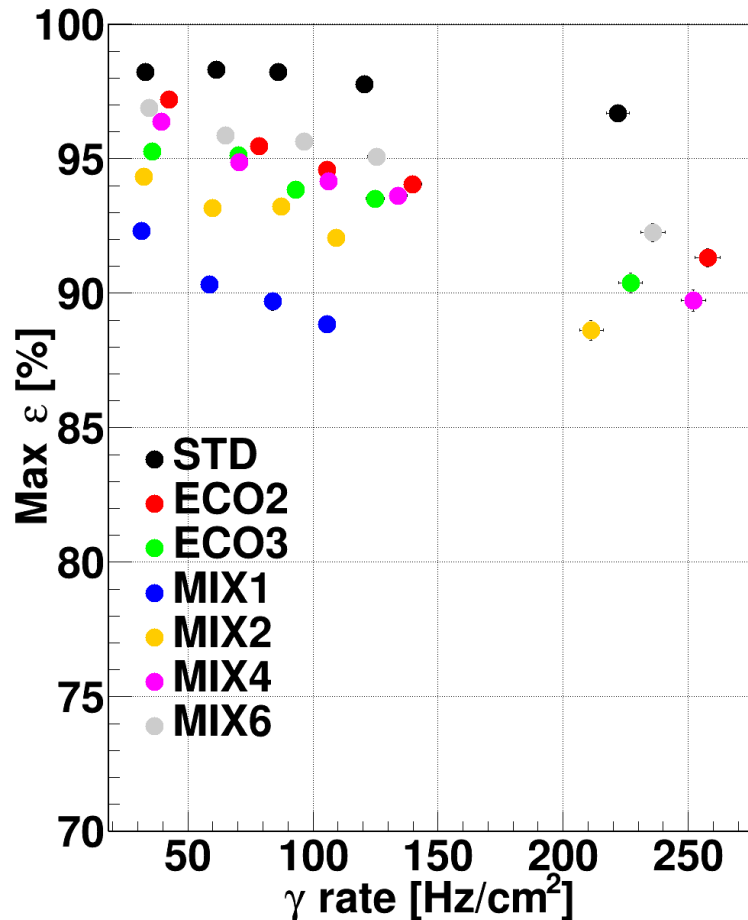
# Preliminary figures - 8

- Gamma rate (at wp) vs ABS for STD/ECO2/ECO3
- WP vs gamma rate for STD/ECO3/ECO3



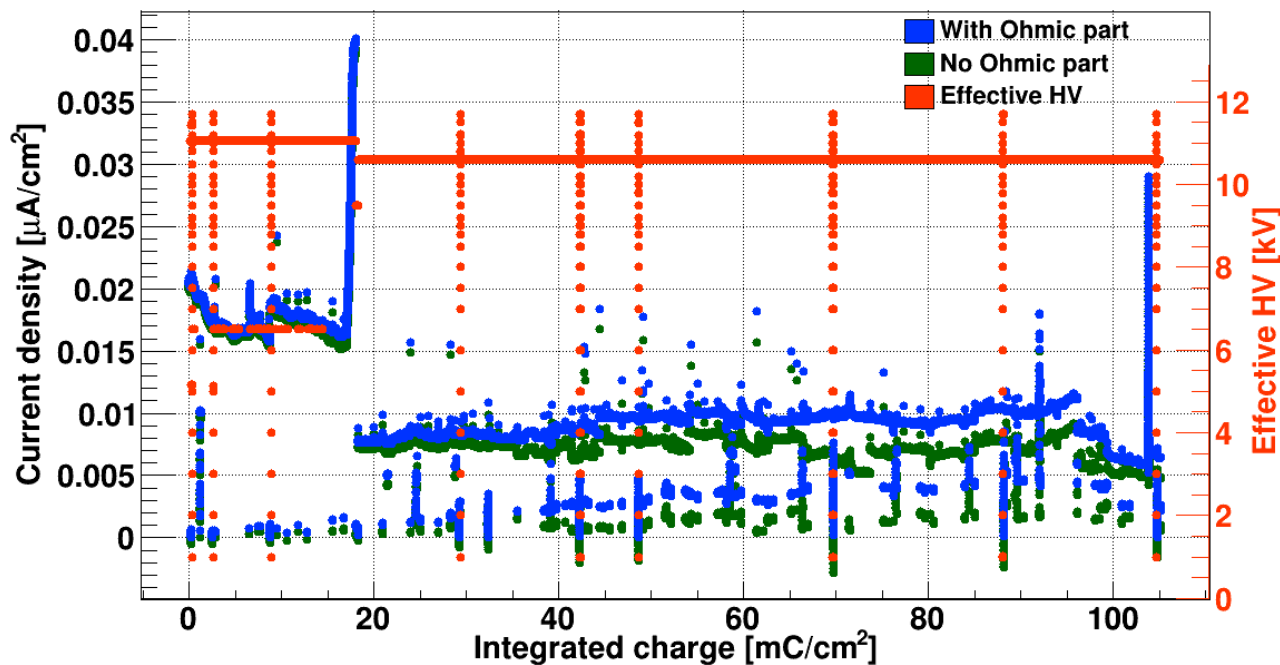
# Preliminary figures - 9

- Max eff vs gamma rate for STD/ECO2/ECO3
- Muon cs at working point vs gamma rate for STD/ECO3/ECO3



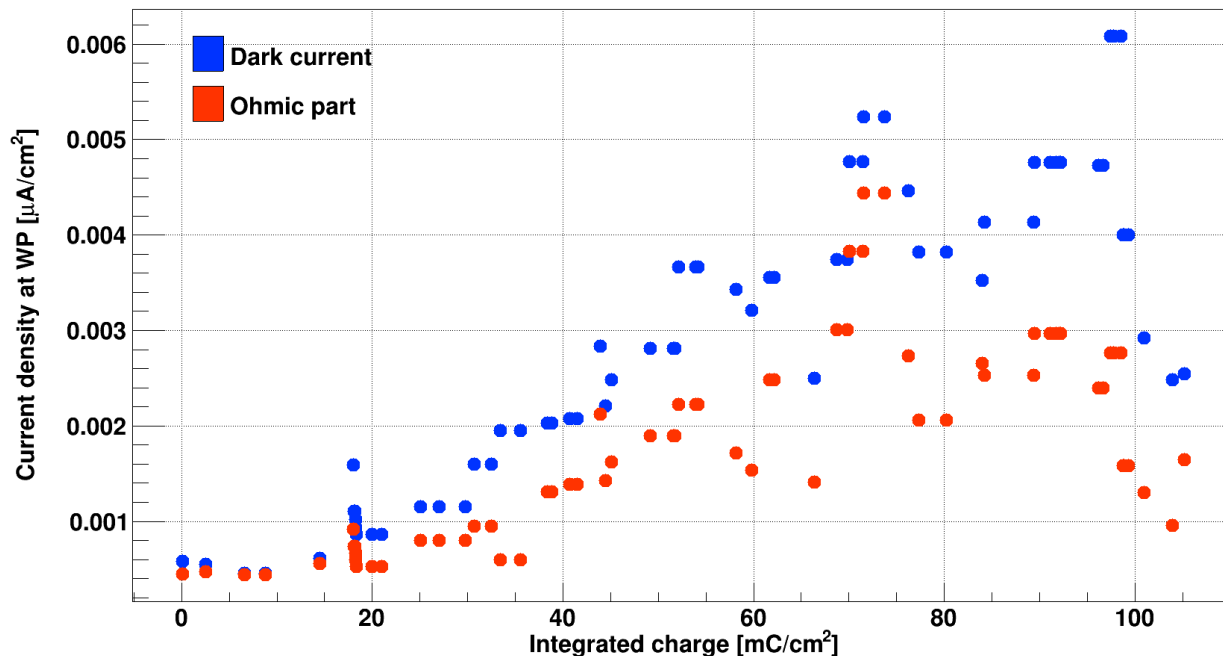
# Preliminary figures - 10

- Trend of the current at all times (source ON and source OFF) vs integrated charge  
→ can be produced for all detectors
- With and without the contribution of the Ohmic part of the dark current (recalculated week by week using the weekly source off scan)
- Also shows the stability of the applied HV



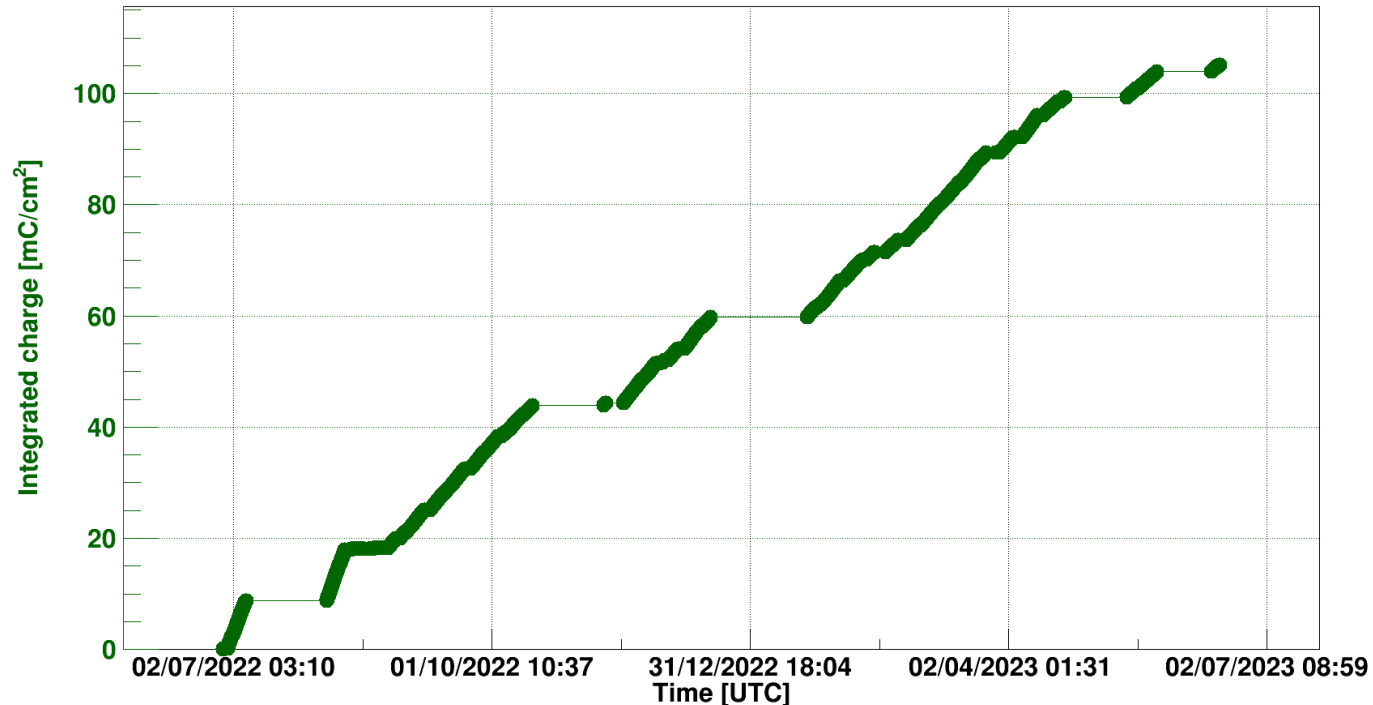
# Preliminary figures - 11

- Total dark current + Ohmic part of the dark current at irradiation voltage vs integrated charge
  - can be produced for all detectors
  - can also be shown vs time but in this way if we didn't have irradiation for some time there are no gaps
  - same source OFF scan shown multiple times, we can also decide to show a single scan per week or something similar



# Preliminary figures - 12

- Integrated charge vs time to show the aging progression
  - can be produced for all detectors
  - integrated charge calculated without Ohmic contribution to the dark current
  - can also be produced with the Ohmic component on the same plot to show the difference between the two scenarios





# Conclusions

- First plots are being produced
- After the meeting we will updated them to the shared folder for you to have a look
- By next meeting:
  - 1) Update of plots with comments from this meeting
  - 2) Production of plots for (hopefully) all detectors involved
  - 3) Continuation of paper writing

**Thank you for your  
attention!**