Status Report

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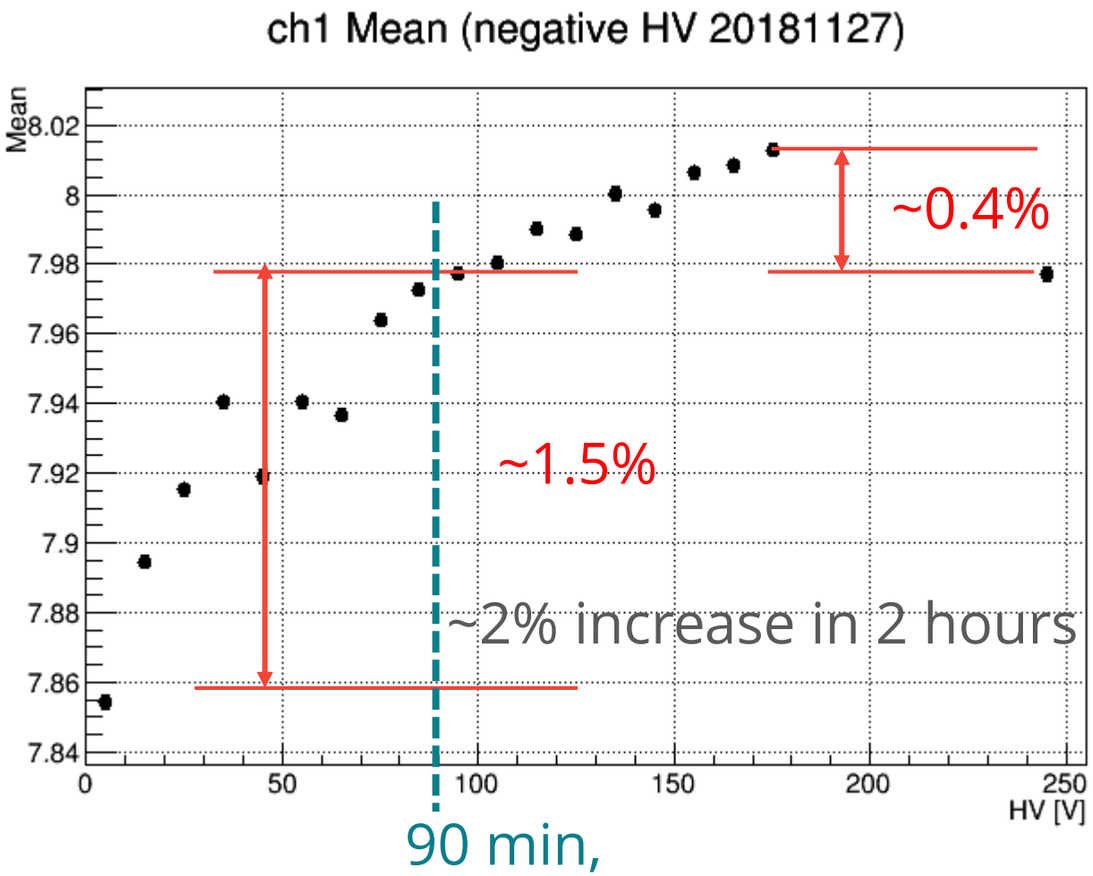
So far

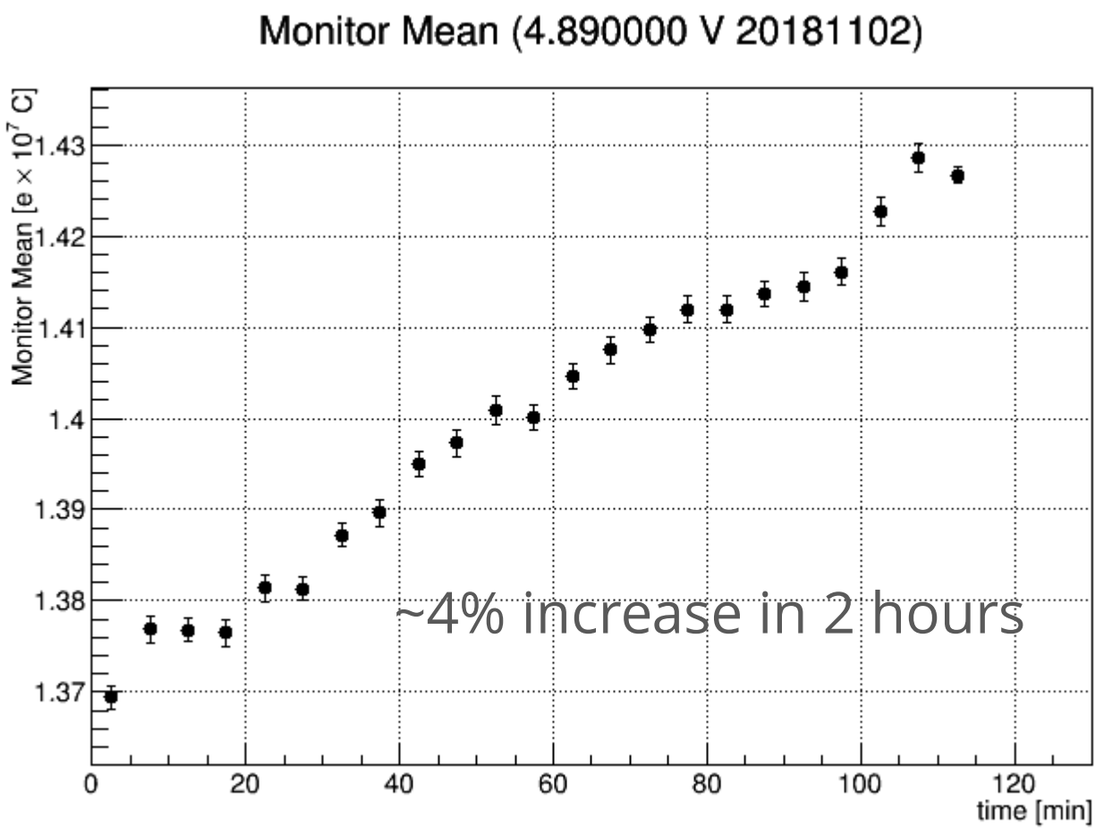
- Sorry, I forgot to bring the waveform of the event, which has more different value of baseline btw calculated one and the mean of adc hist. of pedestal event.
  - But already looked for the event number with calculating the substraction of the mean of adc histogram and caluculated baseline.

- analyze_data modification
  - the function calculate baseline become to use the Gaussian Fit
- Stability for Monitor PMT/LED
- Light Uniformity

- The meansurement was done for BC0035

Stability for LED

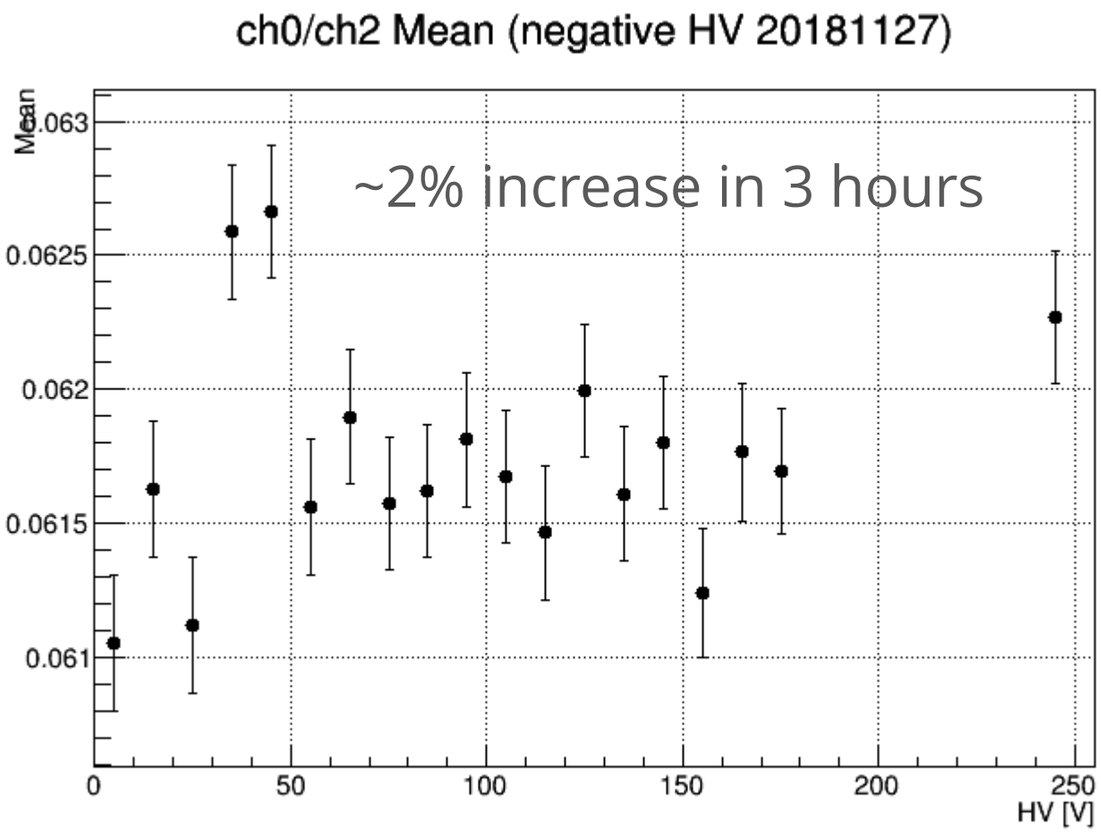


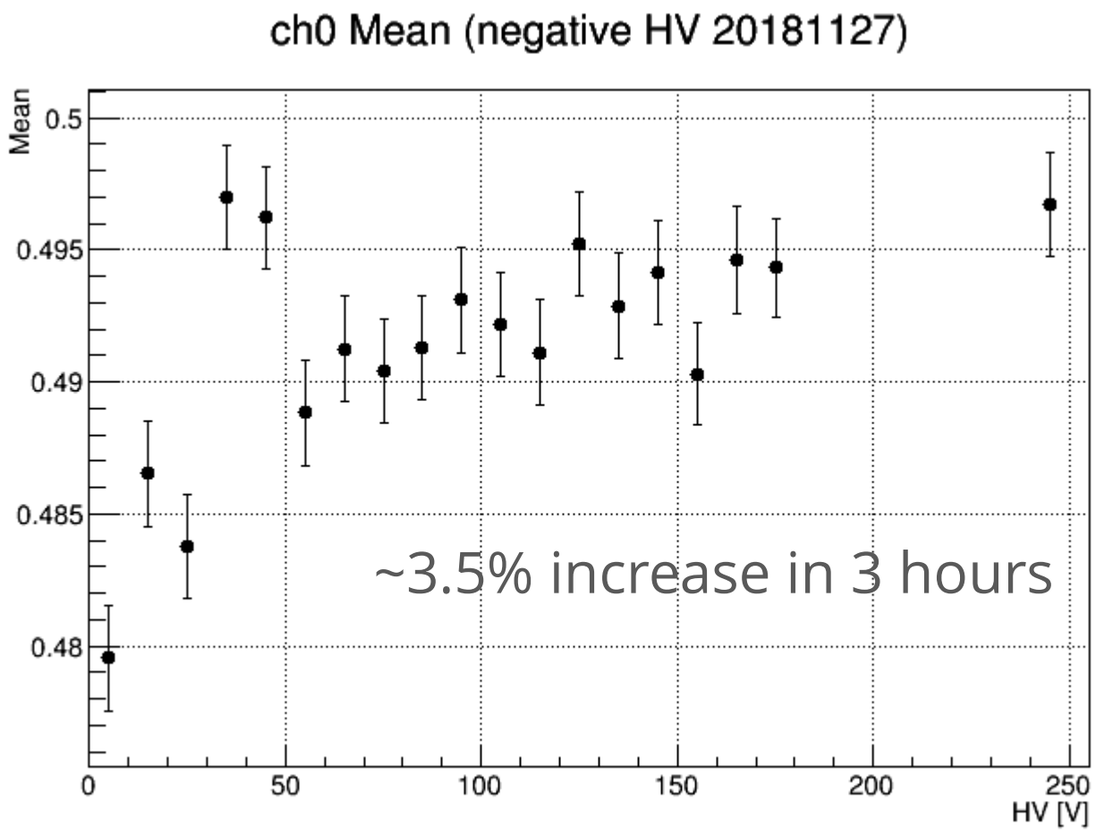


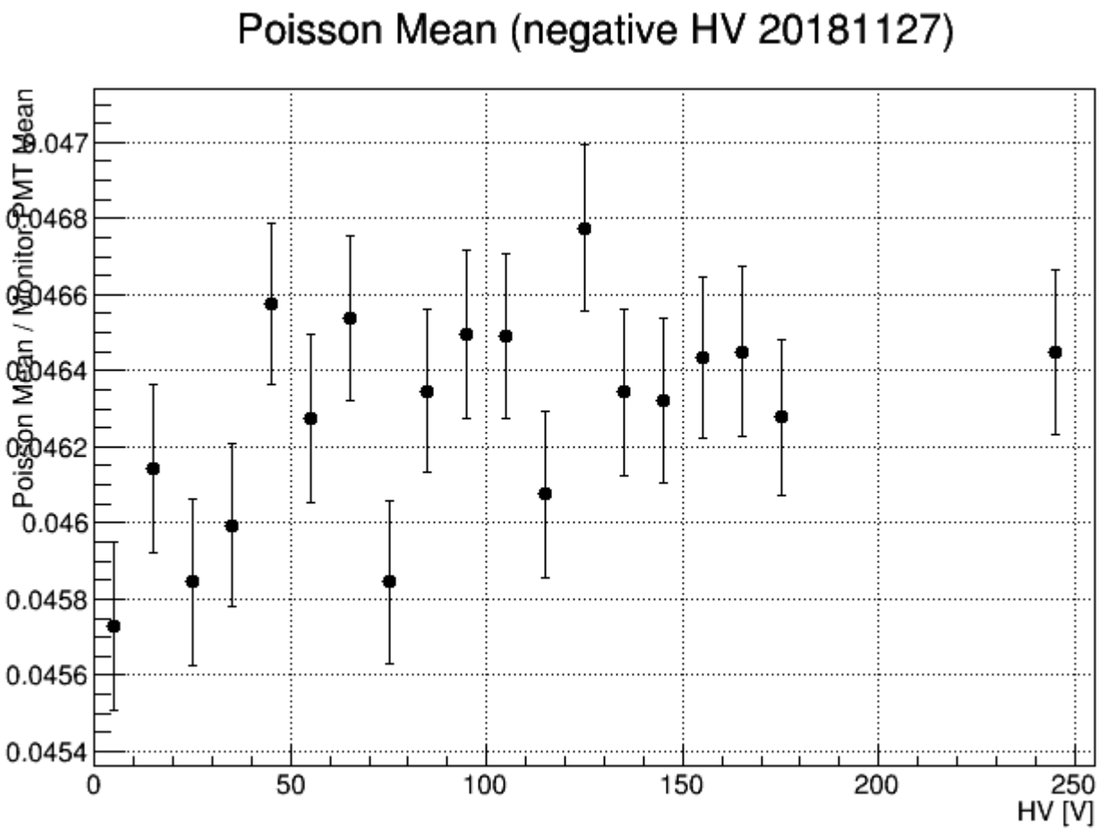
1. 10:45 Monitor PMT on
2. 13:45 LED on/ 3”PMT HV on up to -1200V
3. 13:50 start to masure
4. the data was taken by 10 minutes (by ~200,000 events)

- LED should be left on more than 90 minutes.

Stability 3”PMT

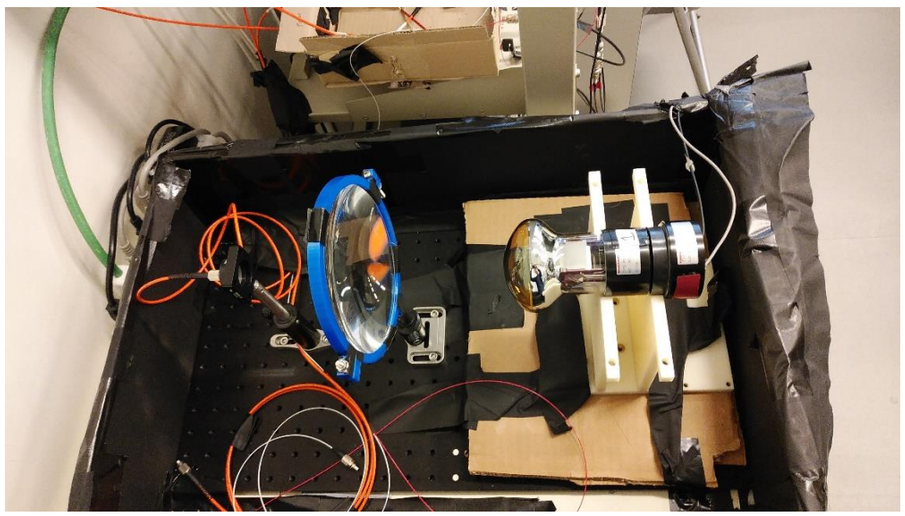


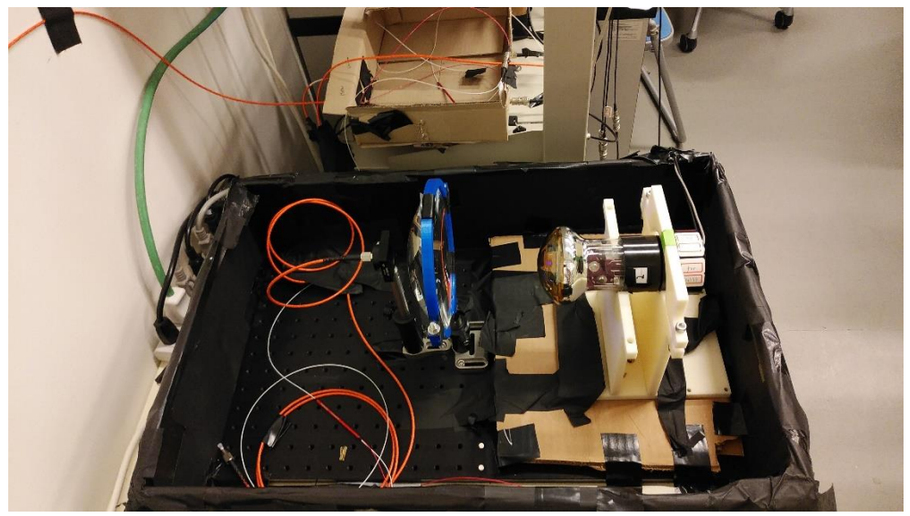




- Re-measure after leaving LED on more than 90 min.

Light Uniformity





Mean [e× 10^7C]	left 1.15 cm	center	right 1.15 cm
previous(Poiss.)	0.567(0.4312)	0.536(0.4075)	0.513(0.389)
closer	1.957	1.967	1.883

Net LED intensities should differ at each setting due to distance difference, so we need to compare in the each line.

- Make the LED closer to the lens to avoid un-uniformity of light.
  - In the setting so far the light passing through the lens would be focused, and that could cause the ringing light, in which the bourndary has much more photon than center region of light.
  - There are 2 options to solve this ringing problem. One is to have the 3”PMT closer to the lens, the other is to make the LED closer to the lens. This time, we tried doing the latter way.
- Need to move the 3”PMT to the left

Summary and to do

- LED should be kept on at least 90 min.
- When having the LED closer to the lens, the light become more uniform. But the 3”PMT need to be moved to the left.

- Show the waveform of pedestal event
  - , which has most biggest substraction value of the mean of adc hist. and the calculated baseline.
- Measure stability of 3”PMT
  - Start 90 min. after the monitor PMT HV and the LED on.
- Measure the uniformity
  - the 3”PMT will be moved to the left.
- Measure n p.e. (n>1) events, and get TTS plots against # of p.e.
- Reflector measurement
  - compare number of p.e.