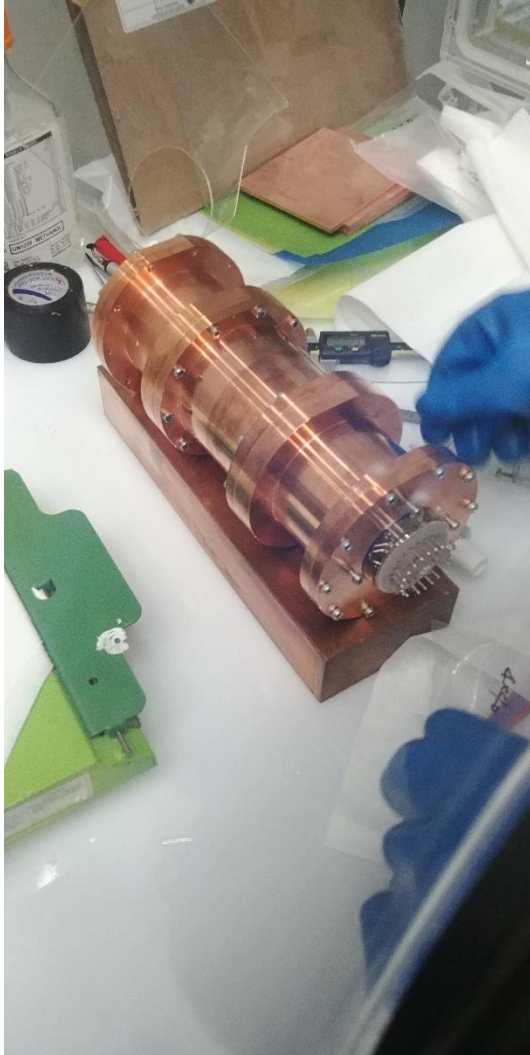


NEON(R&D)

2019/08/01
Jae Jin Choi



R&D NaI(Tl) Crystal(NaI-032)



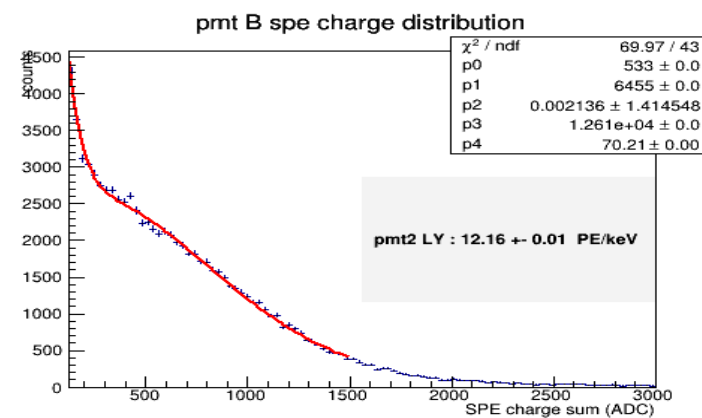
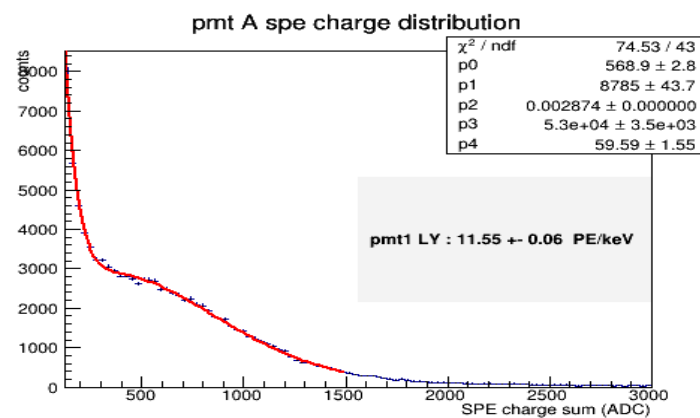
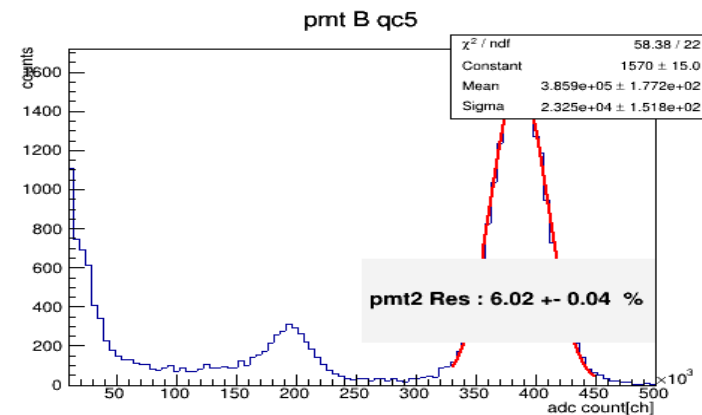
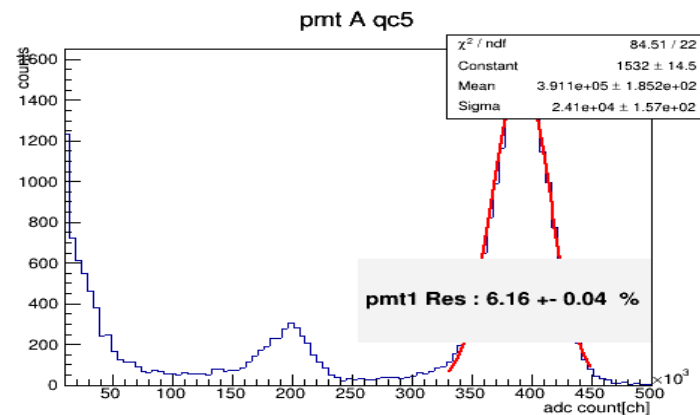
- NaI-032(3-inch crystal)
- Before 4-inch crystal(LY around 13 Pe/keV)
- Shielding status : Pb 15cm Cu 6cm shielding
- NaI-032- $\rightarrow$ NEO-1
- NaI-033- $\rightarrow$ NEO-2

R&D NaI(Tl) Crystal(NEO-1)



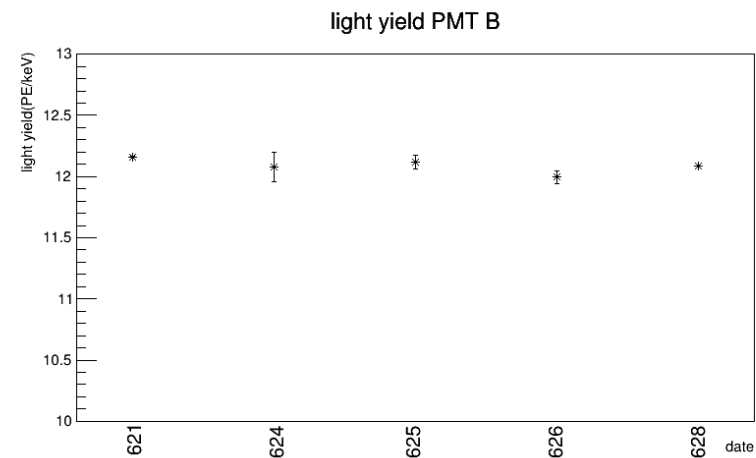
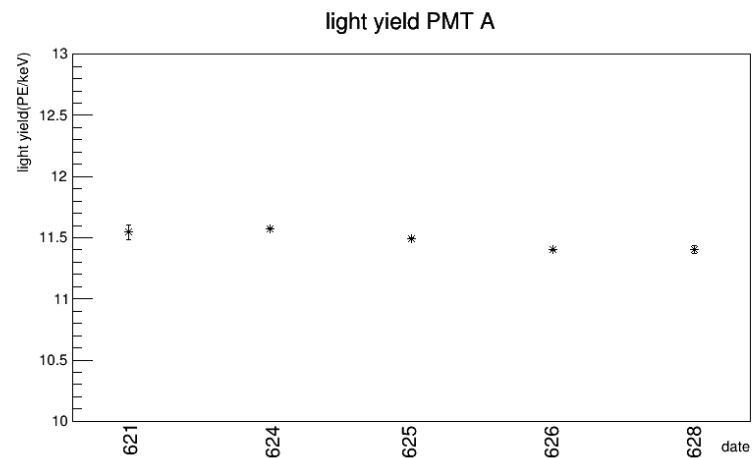
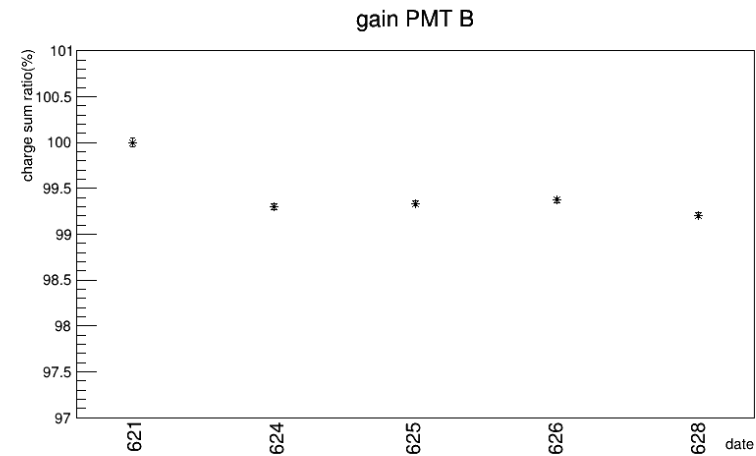
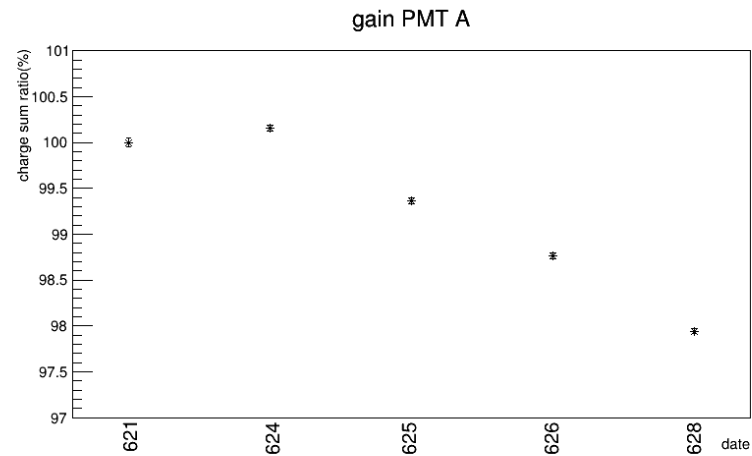
- Polished 3 inch(diameter) X 4 inch(height), 1.6kg mass

R&D NaI(Tl) Crystal(NaI-032)



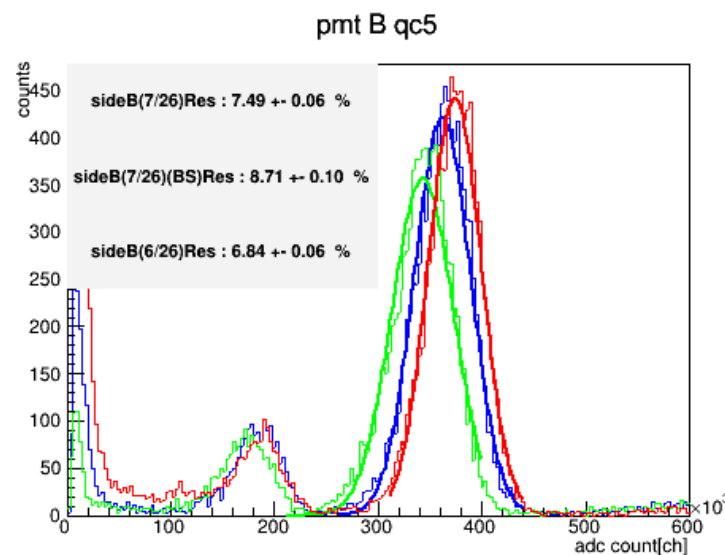
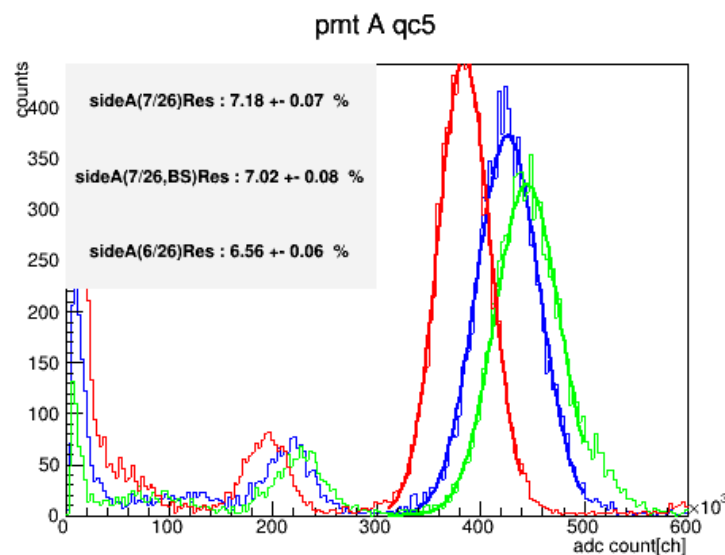
- Light yield of NaI-032 crystal : 23.71 ± 0.06 PE/keV

R&D NaI(Tl) Crystal(NaI-032) light yield

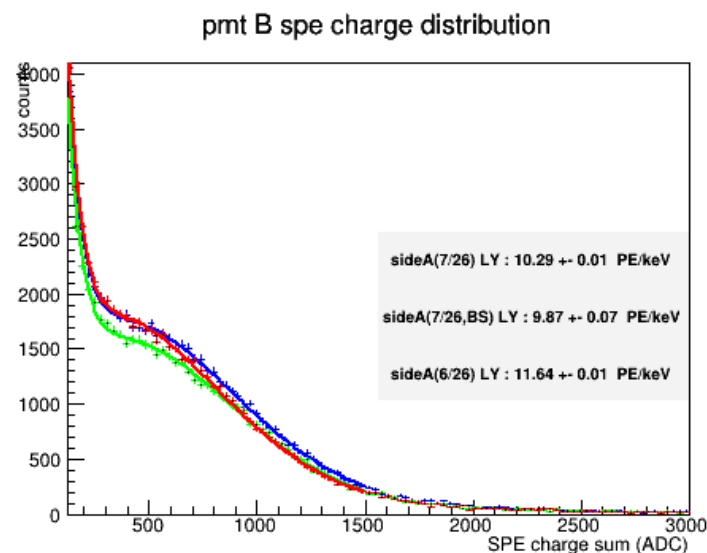
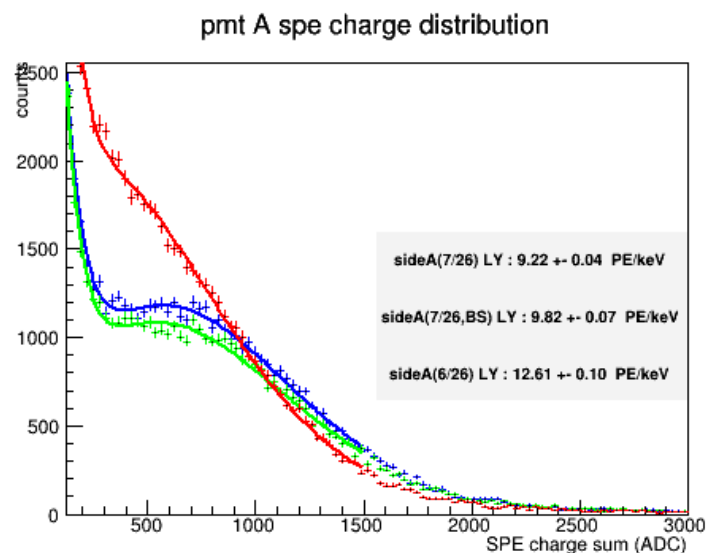


- Gain & LY stability check

R&D NaI(Tl) Crystal(NaI-032) light yield

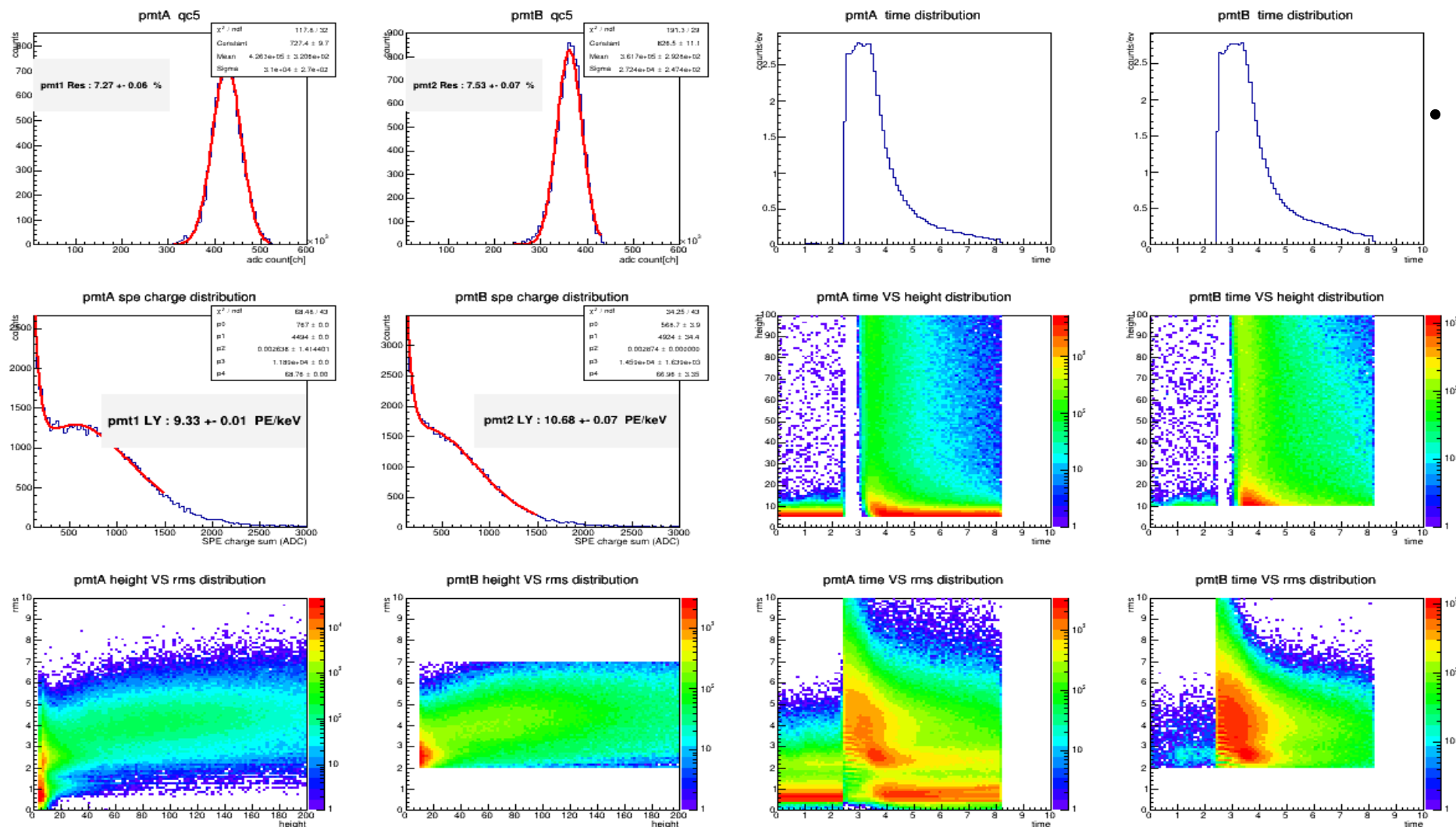


- 7/26(with black sheet)
- 7/26(different source position)
- 6/26(swapped pmt)



Time cut(4.5~6.5)

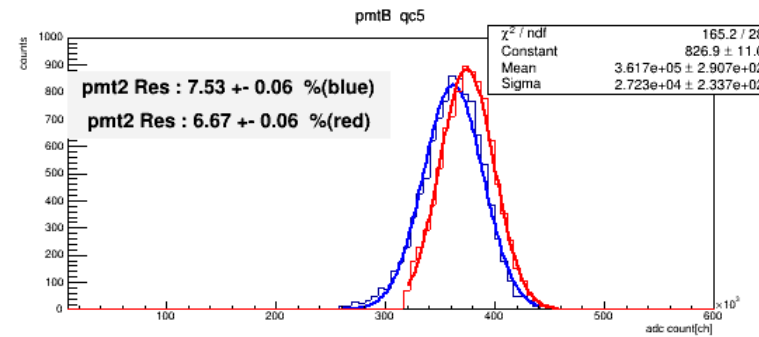
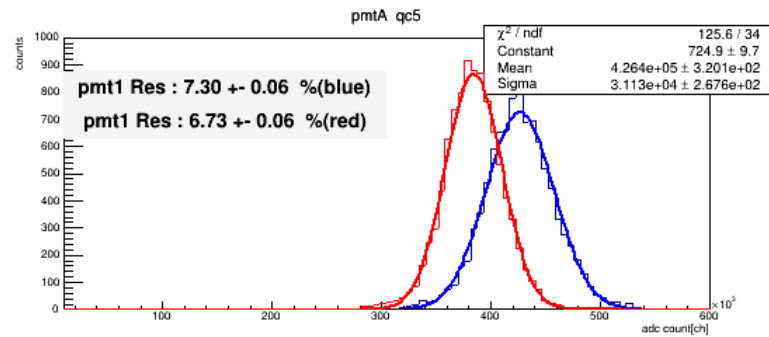
R&D NaI(Tl) Crystal(NaI-032) light yield time cut



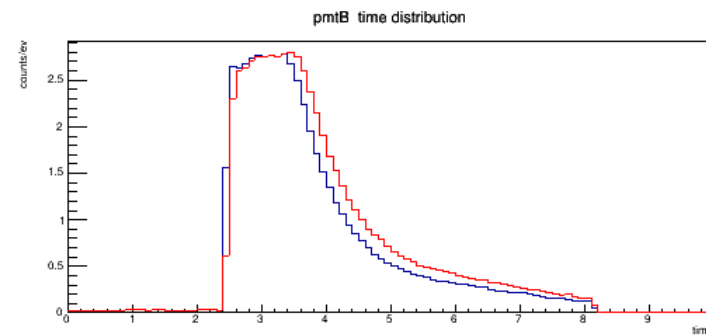
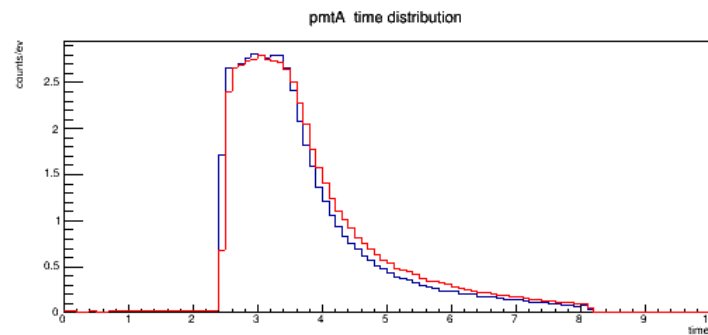
- pmt b : time cut using code(8 spe in 2us with height & RMS cut)

- RMS(2~7)
- Height(>10)

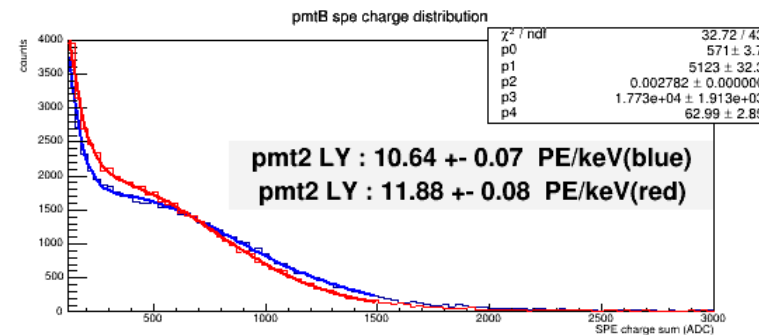
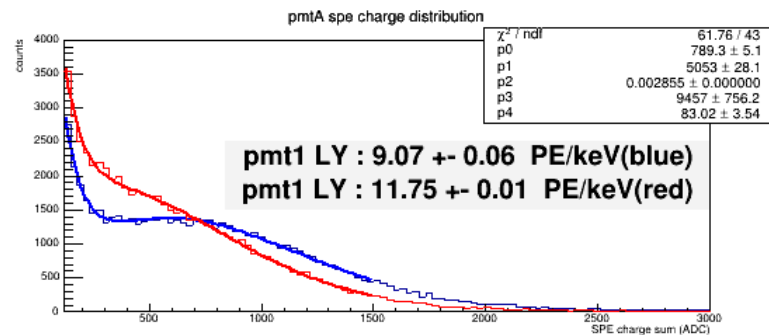
R&D NaI(Tl) Crystal(NEO-1) light yield time cut



- 7/26(with black sheet)
- 6/26(switched ch)

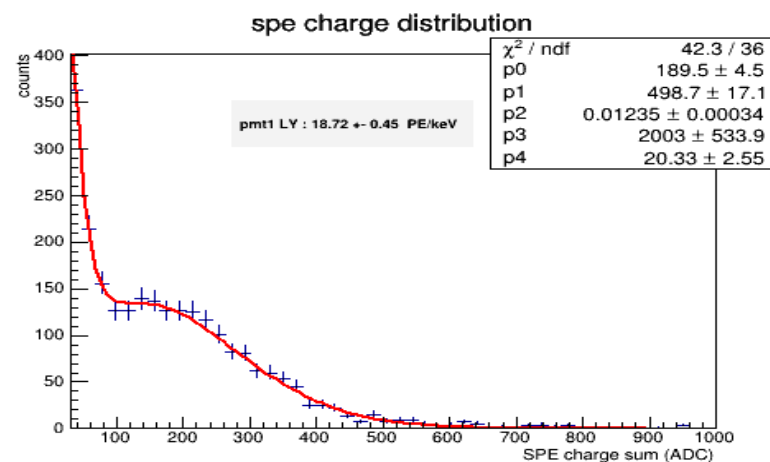
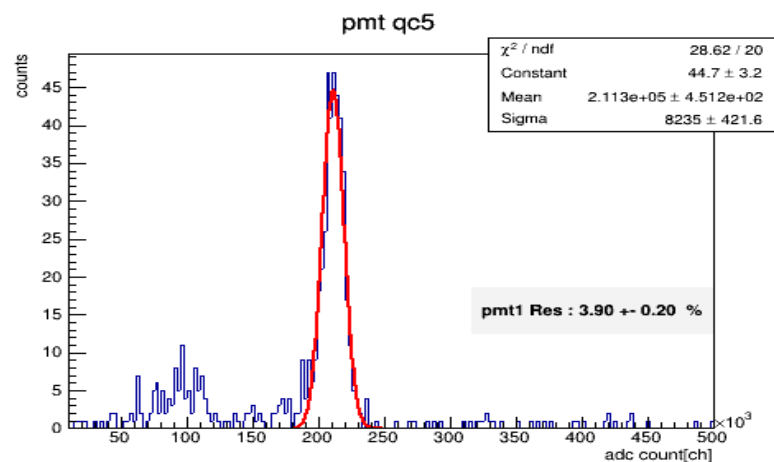


- RMS(2~7)
- Height(>10)

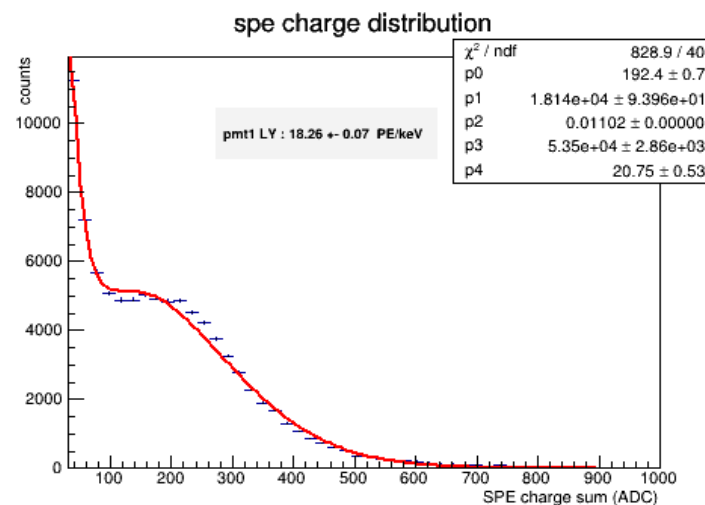
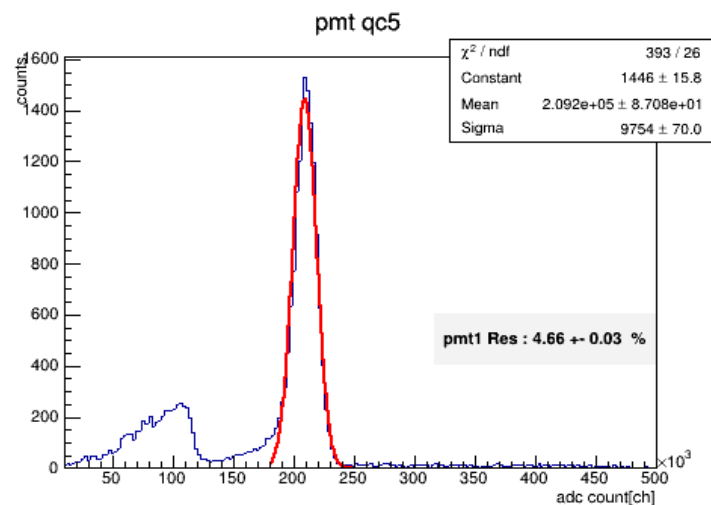


- scaling

R&D NaI(Tl) Crystal(NEO-2) light yield



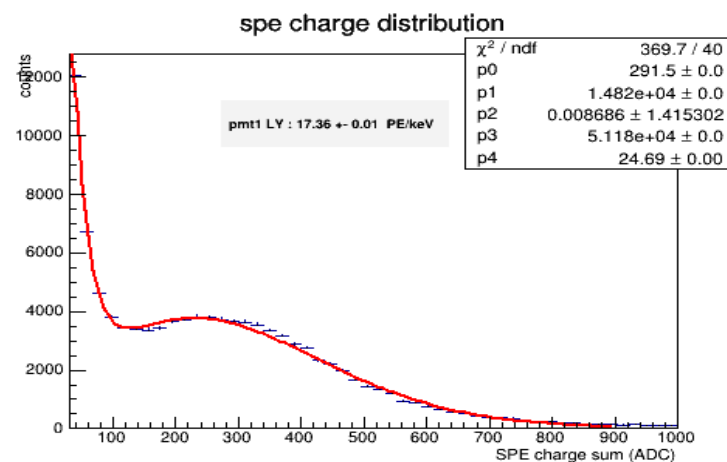
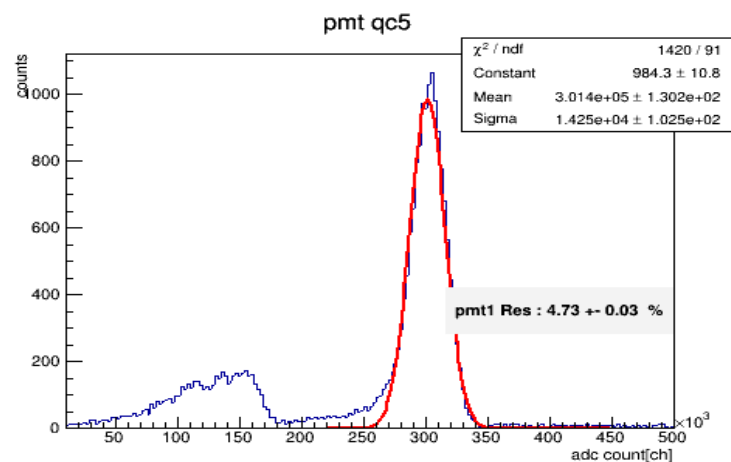
• 7/1



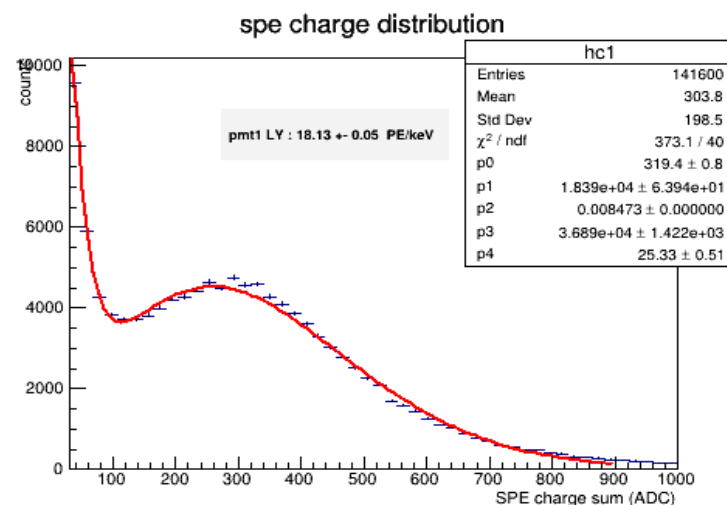
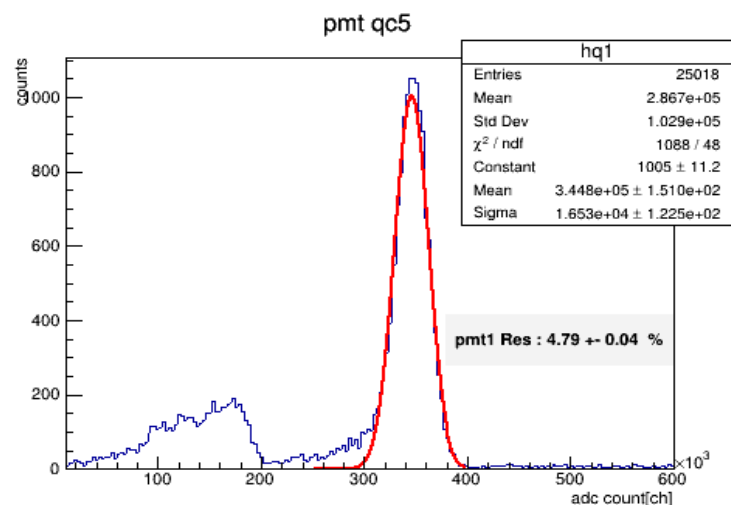
• 7/31

• HV : 1000

R&D NaI(Tl) Crystal(NEO-2&3) light yield



- 7/31
- NEO-2



- NEO-3
- HV : 1050

Backup