

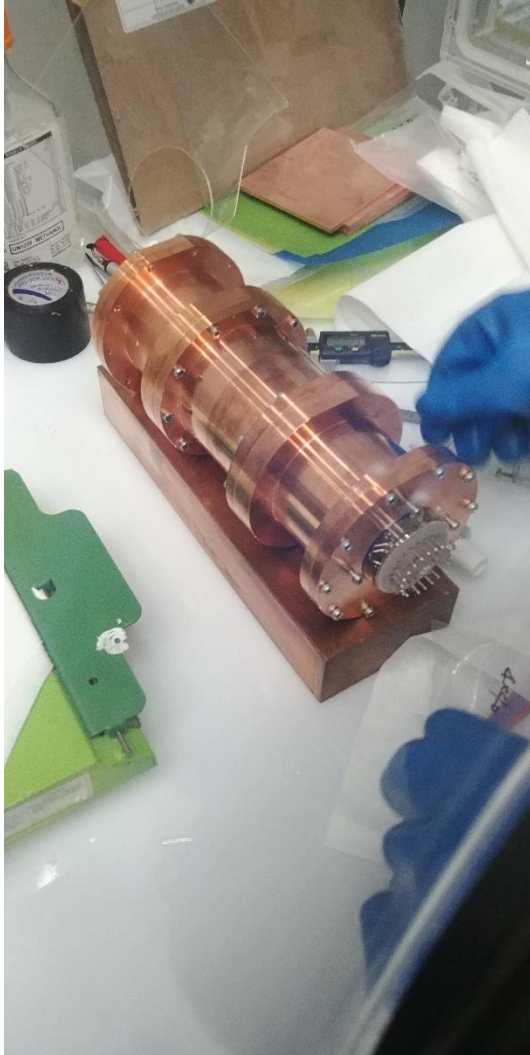
NEON(R&D)

2019/07/19

Jae Jin Choi



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



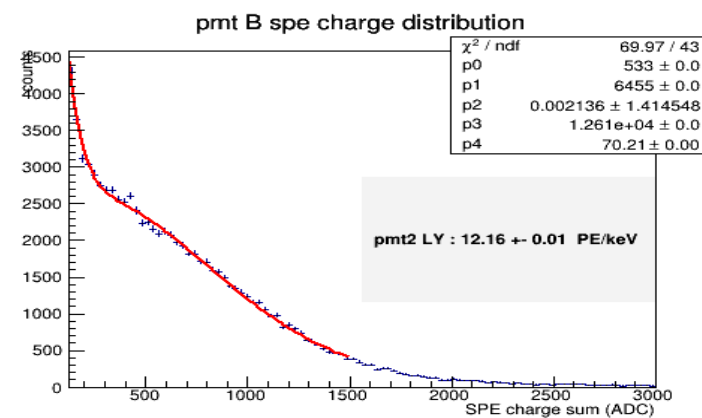
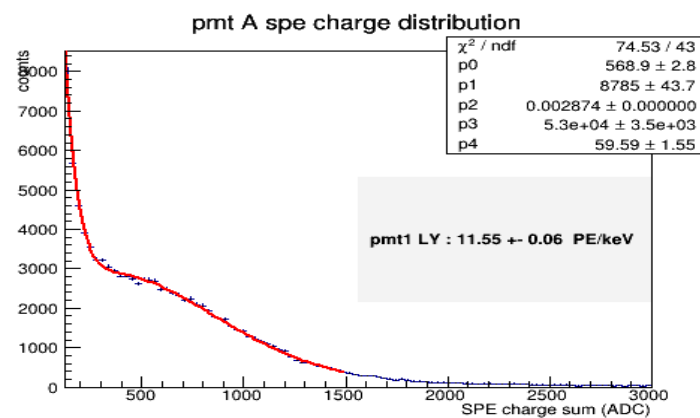
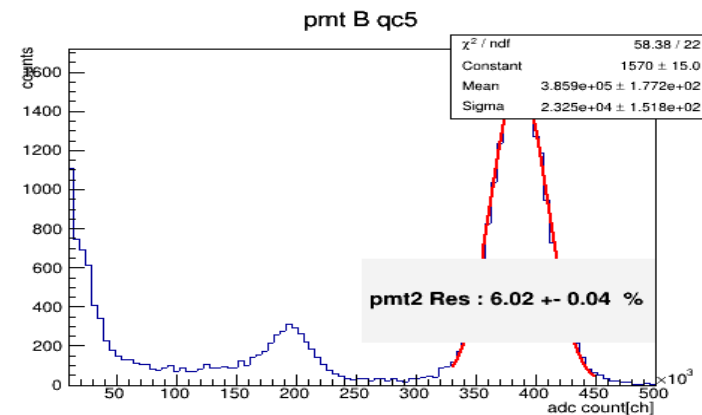
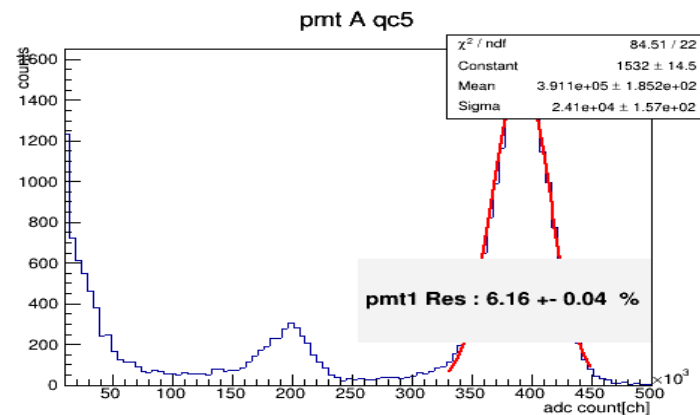
- NaI-032(3-inch crystal)
- Before 4-inch crystal(LY around 13 Pe/keV)
- Shielding status : Pb 15cm Cu 6cm shielding

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



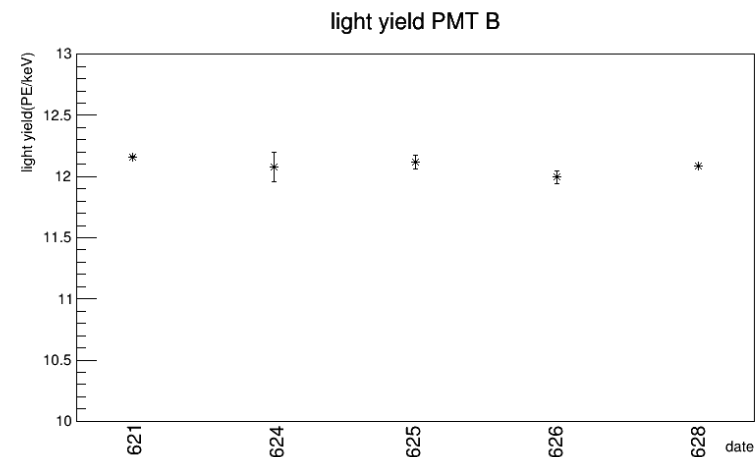
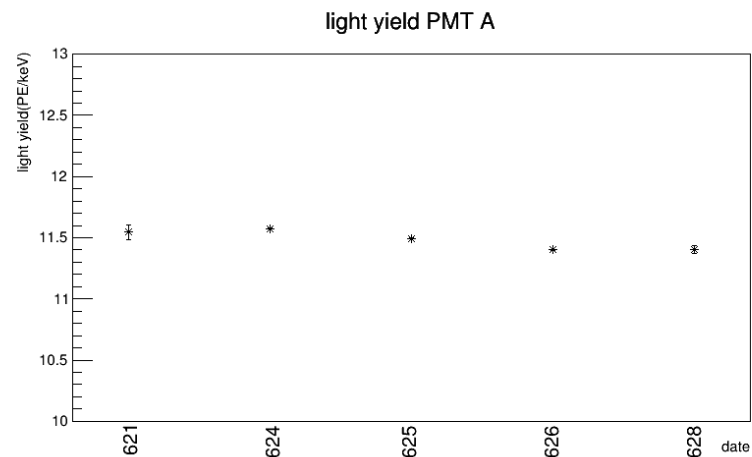
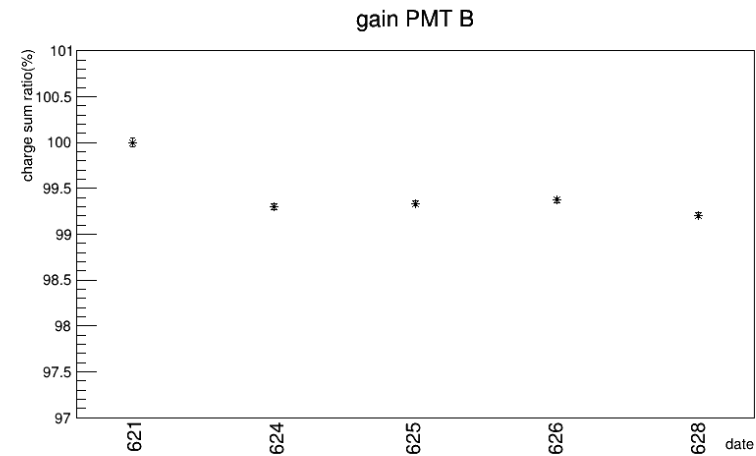
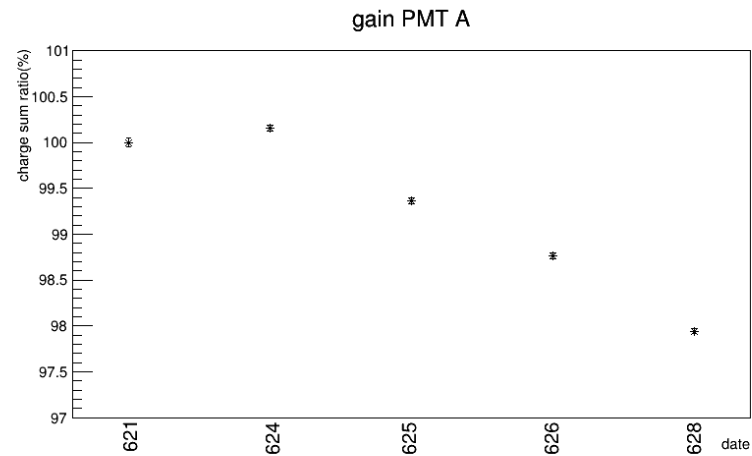
- Polished 3 inch(diameter) X 4 inch(height), 1.6kg mass

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



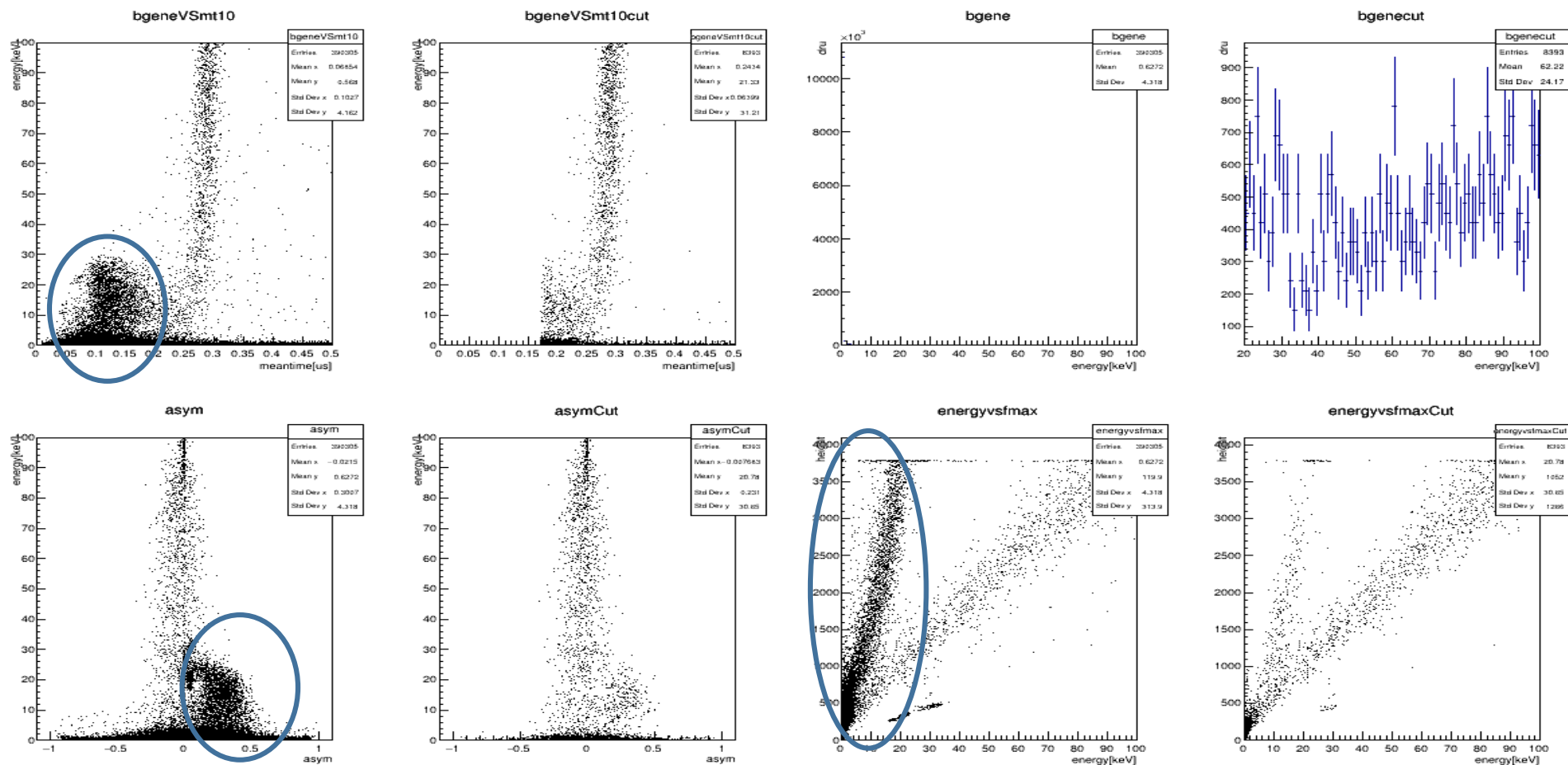
- Light yield of NaI-032 crystal : 23.71 $\pm$ 0.06 PE/keV

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



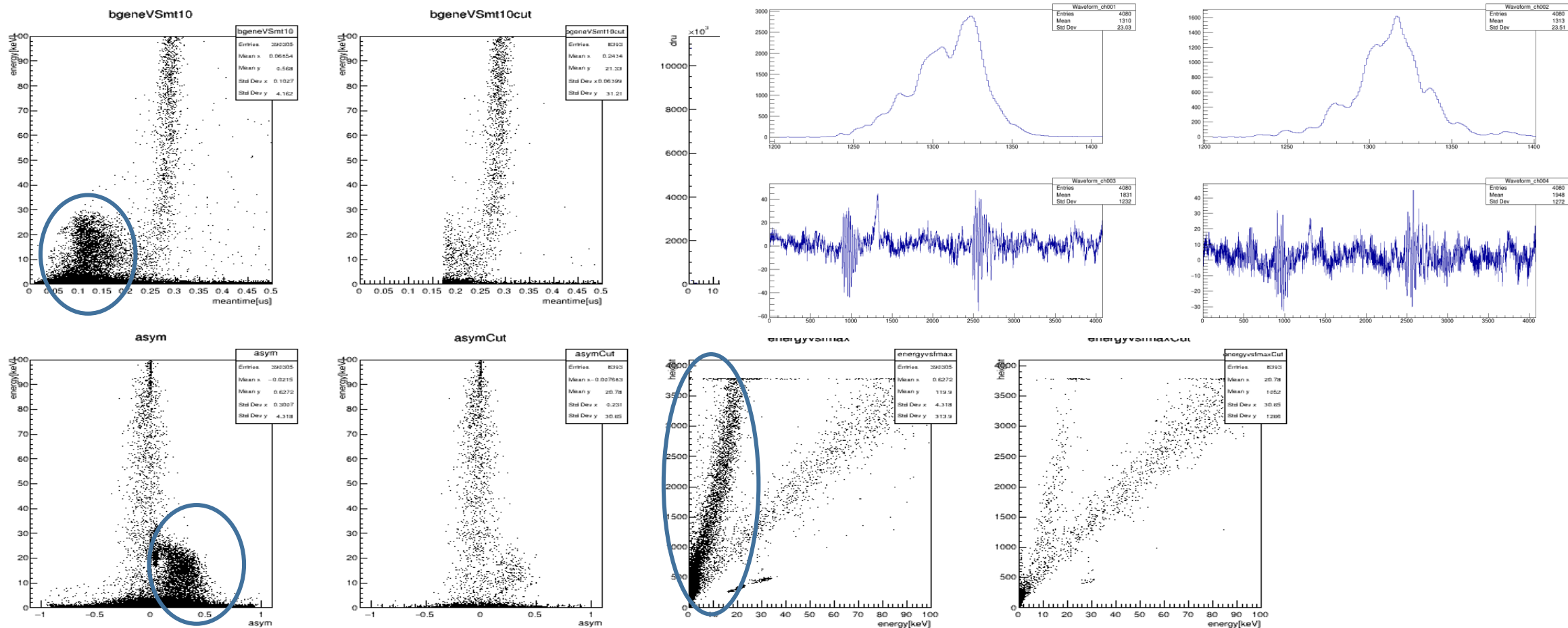
- Gain & LY stability check

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



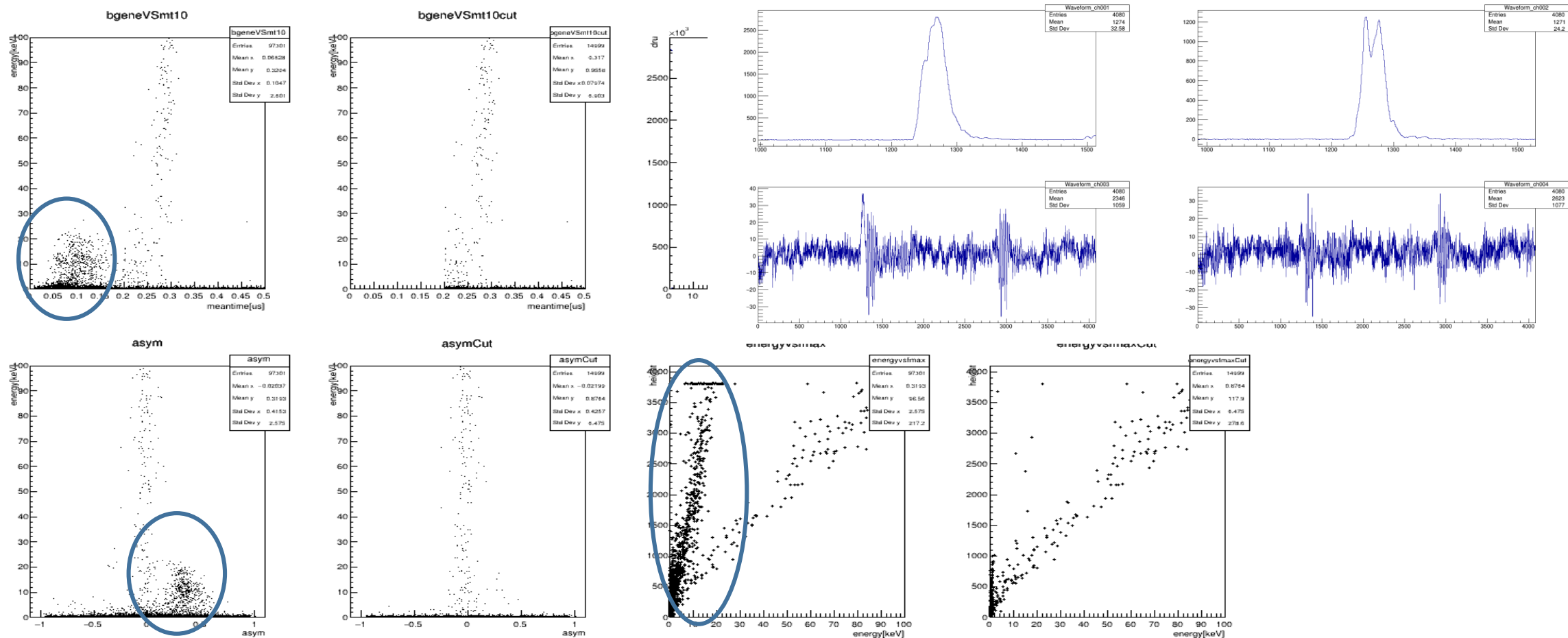
- Background check

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



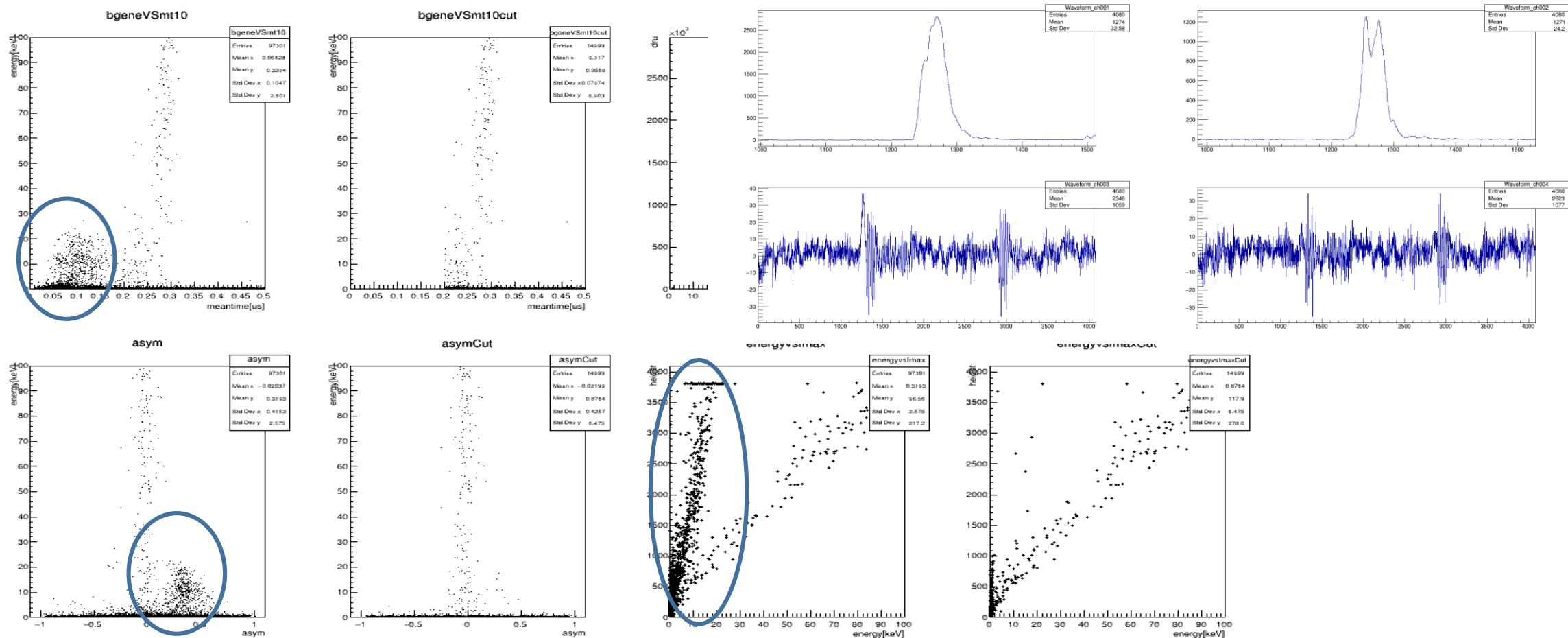
- Background check

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



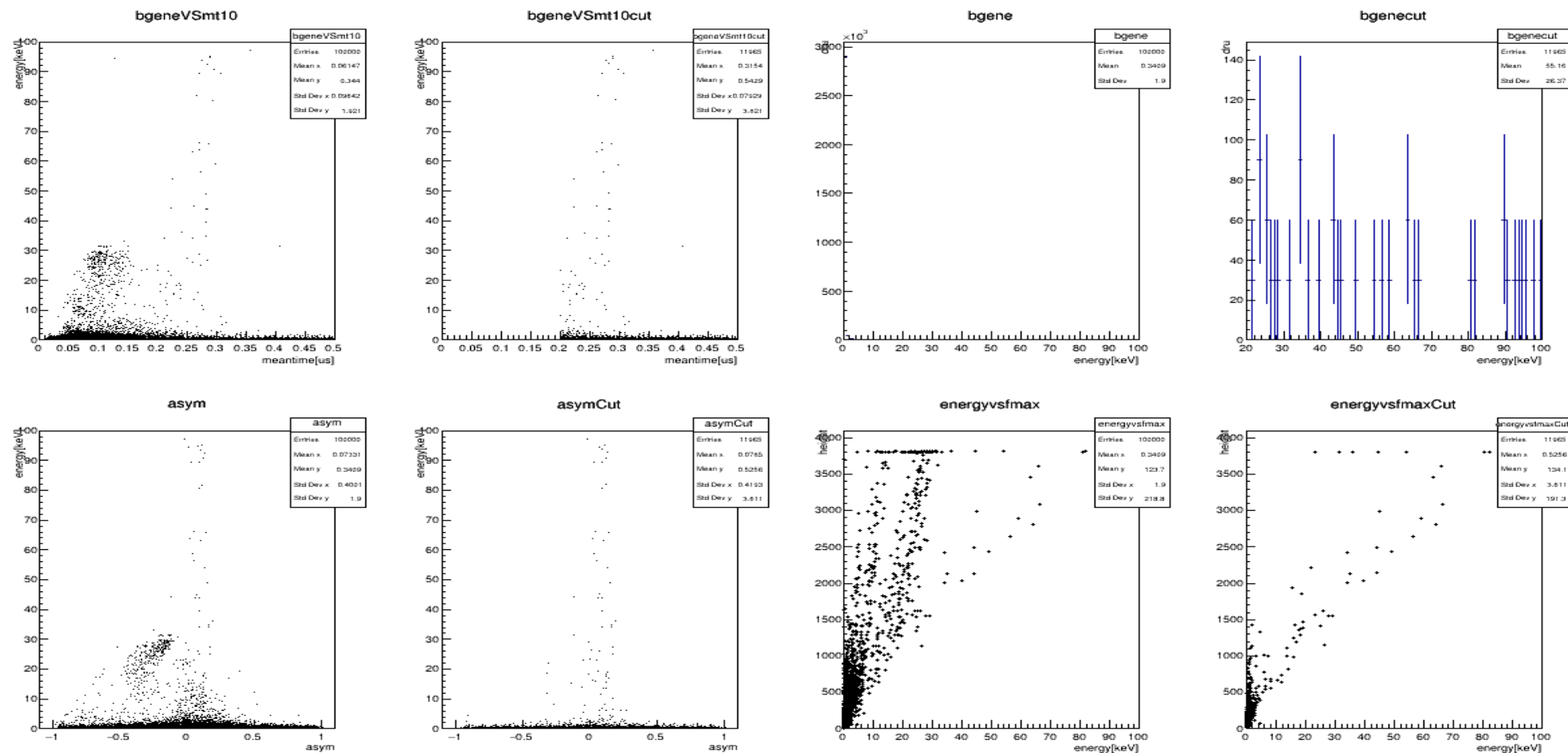
- Background check

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



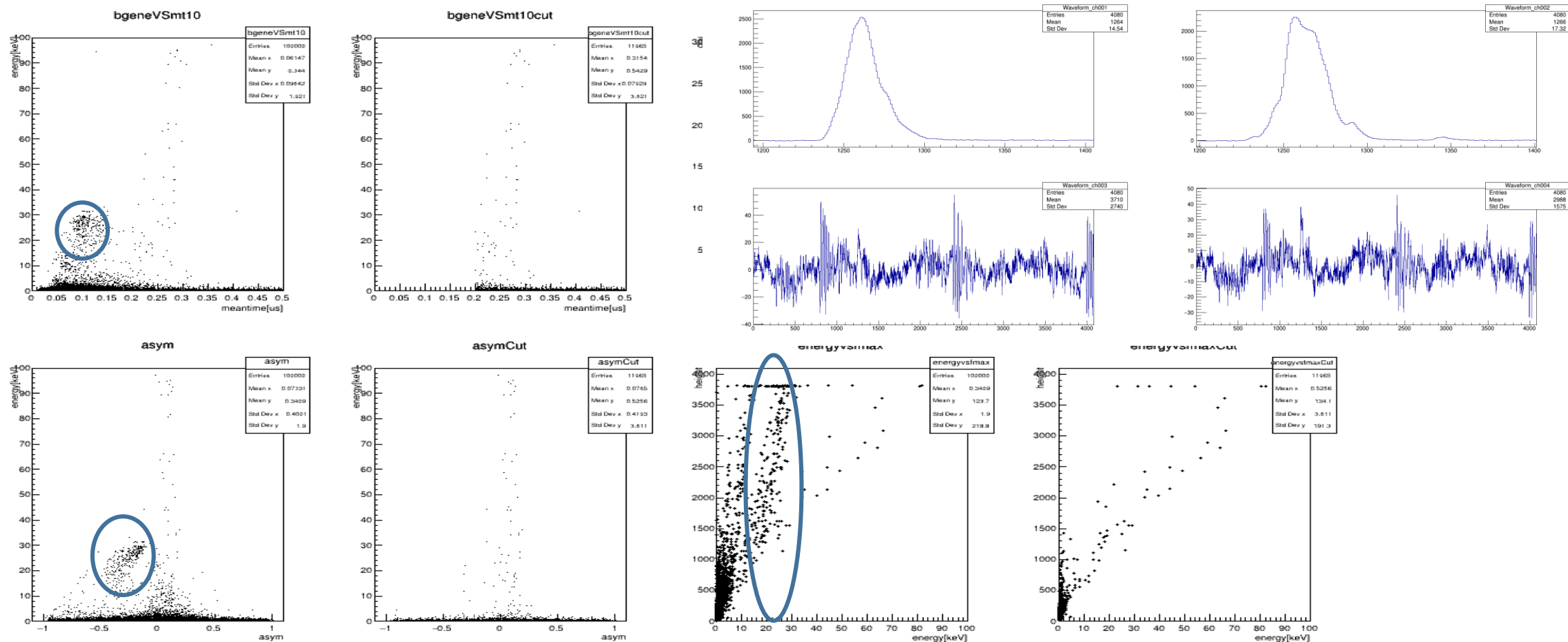
- Background check

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



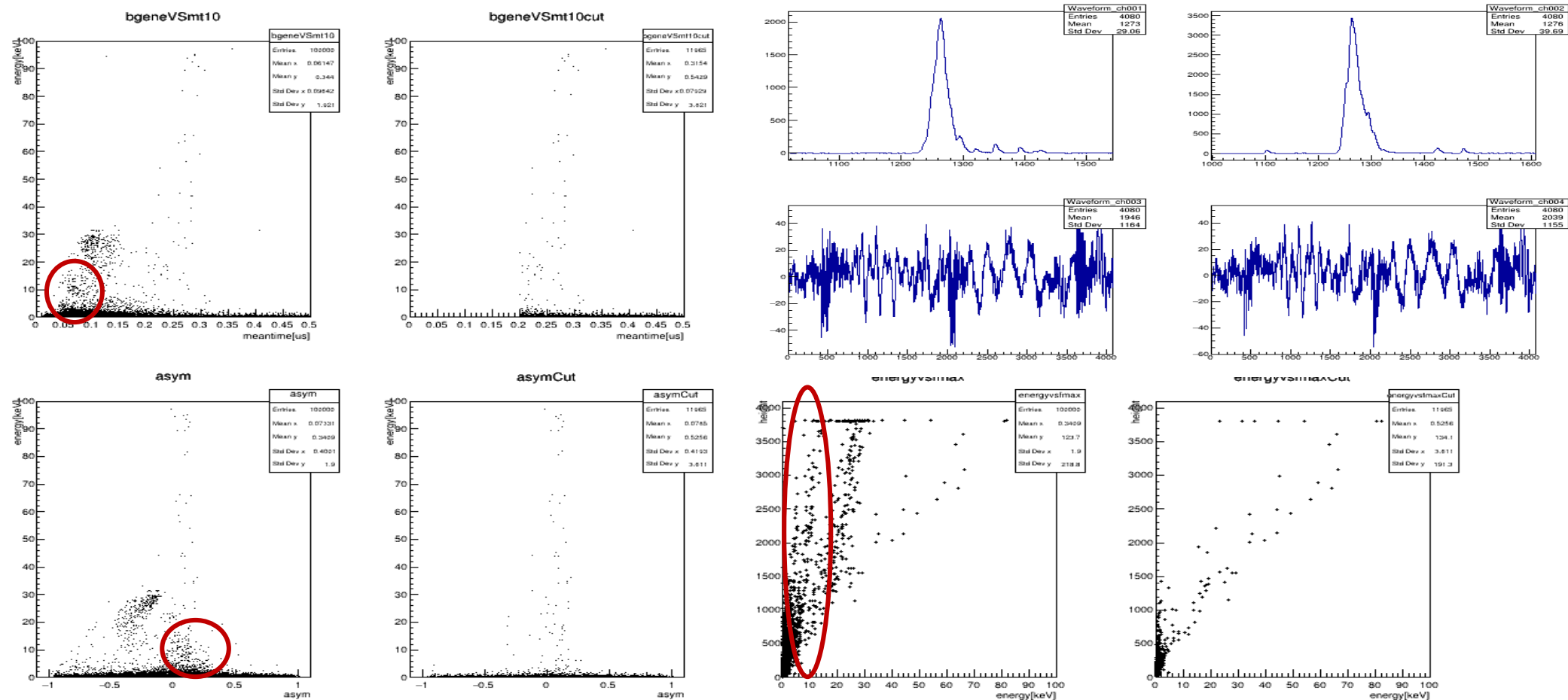
- change channel with base each other

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



- change channel with base each other

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



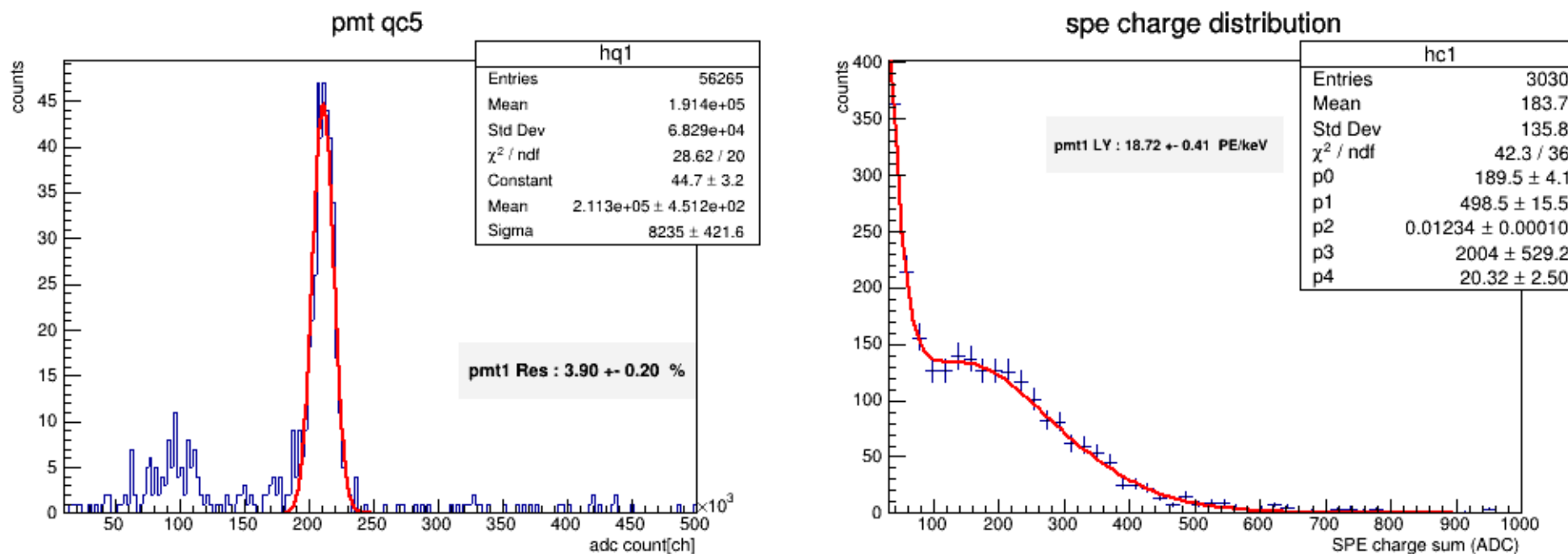
- change channel with base each other

R&D NaI(Tl) Crystal(NaI-033) new crystal



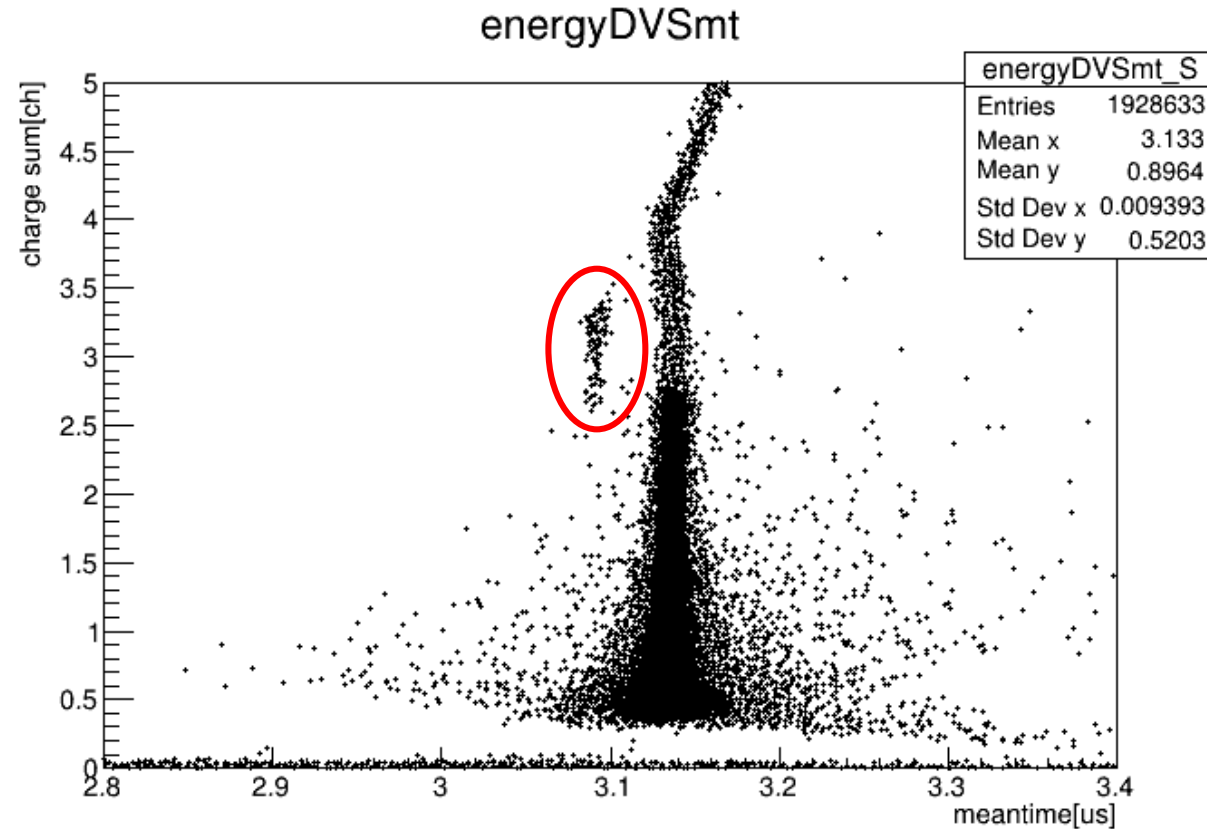
- Alpha spectra 3(diameter) X 4(height) [inch] commercial crystal (1.6 kg)

R&D NaI(Tl) Crystal(NaI-033) new crystal



- One side light yield(prototype encapsulation) : 18.72 $\pm$ 0.41 PE/keV

R&D NaI(Tl) Crystal(NaI-033) new crystal



- Alpha rate : 9 mBq/kg

Backup