

2FADC

FACD 3

Ch 1 : NaI PMT1

Ch 2 : NaI PMT2

FADC4

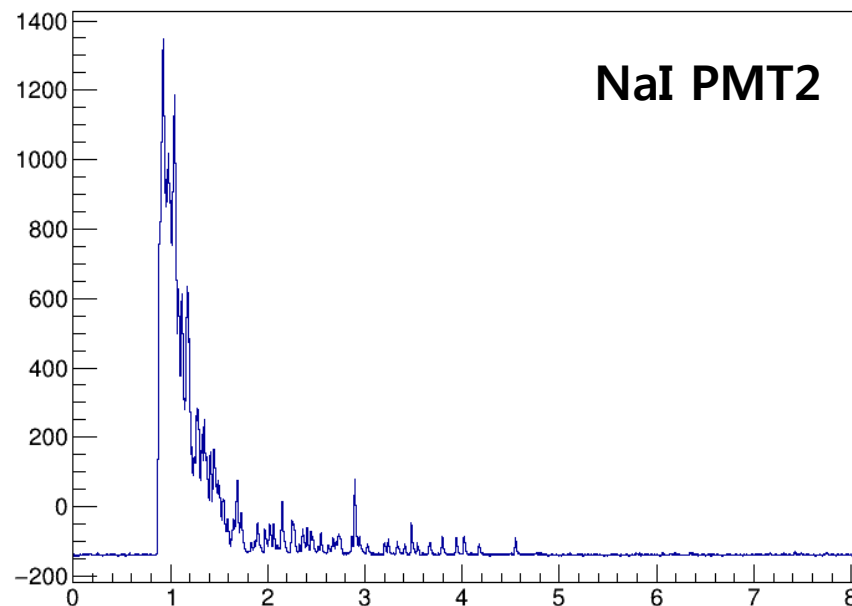
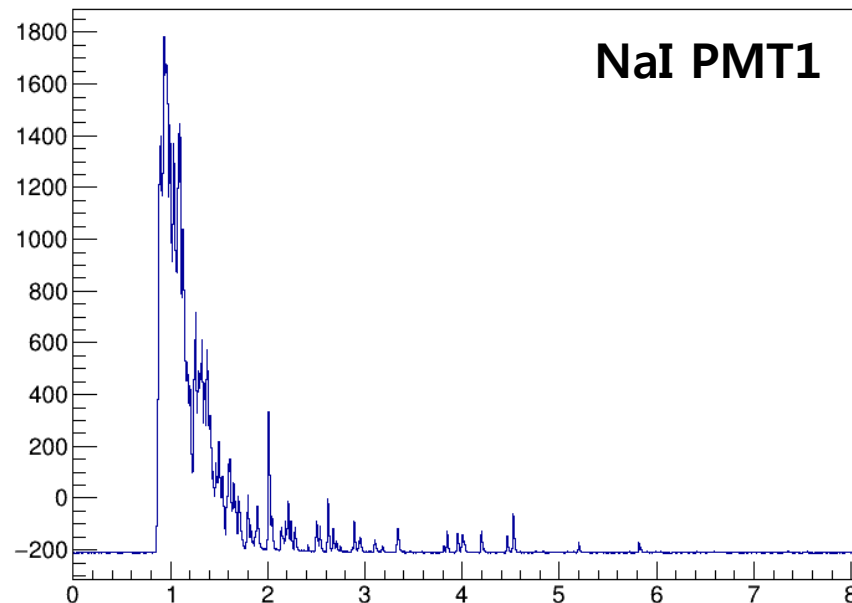
Ch 1 : ND1

Ch 2 : ND2

```
ICB
PTRIG 1000          # pedestal trigger [ms]
CW      256
TRGON 1 # 1 normal, 2 ptrig, 4 ext trig, ....
MTHRF 3 # 2 for NaI trigger
PSCF 1
END

FADCT 3 4
ENABLED 1
CW      200
CID     1 2 3 4
PID     1 2 3 4
TLT     1x2
POL     0
RL      64
THR     15 15 4095 4095
DTIME   0
DLY     3000
DACOFF  3500
TM      1
PCT     1
PCI     200
PWT     50
ZERO    0
END

FADCT 4 4
ENABLED 1
CW      200
CID     1 2 3 4
PID     5 6 7 8
TLT     1+2+3+4
POL     0
RL      64
THR     200 200 200 200
DTIME   0
DLY     3000
DACOFF  3500
TM      1
PCT     1
PCI     200
PWT     50
ZERO    0
END
```



NaI only

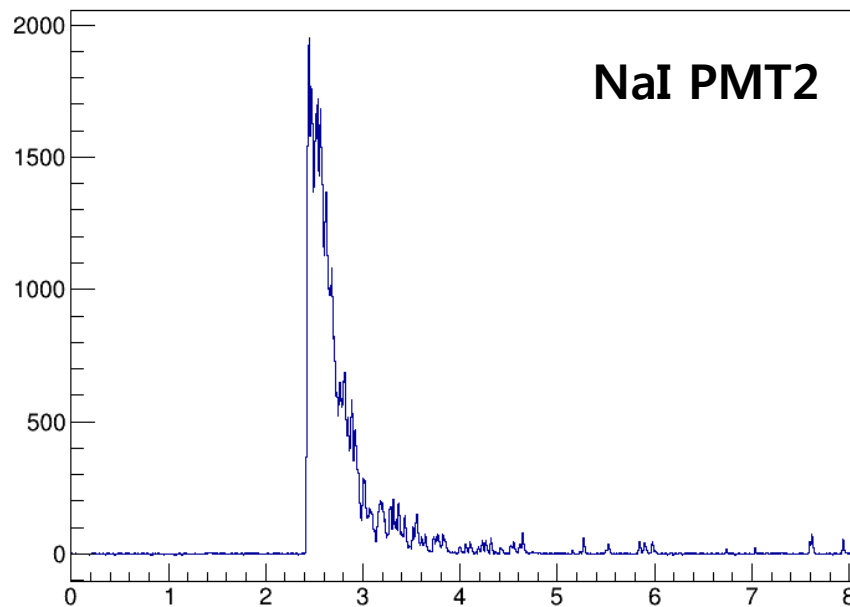
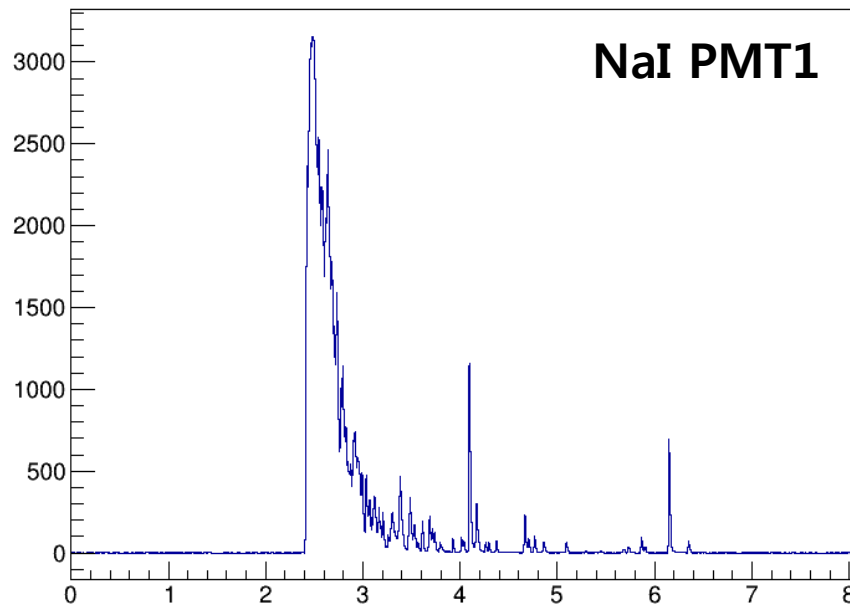
FACD 3

Ch 1 : NaI PMT1

Ch 2 : NaI PMT2

```
TCB
PTRIG 1000          # pedestal trigger [ms]
CW 256
TRGON 1 # 1 normal, 2 ptrig, 4 ext trig, ....
MTHRF 2 # 2 for NaI trigger
PSCF 1
END
```

```
FADCT 3 4
ENABLED 1
CW 200
CID 1 2 3 4
PID 1 2 3 4
TLT 1x2
POL 0
RL 64
THR 15 15 4095 4095
DTIME 0
DLY 3000
DACOFF 3500
TM 1
PCT 1
PCI 200
PWT 50
ZERO 0
END
```



ND only

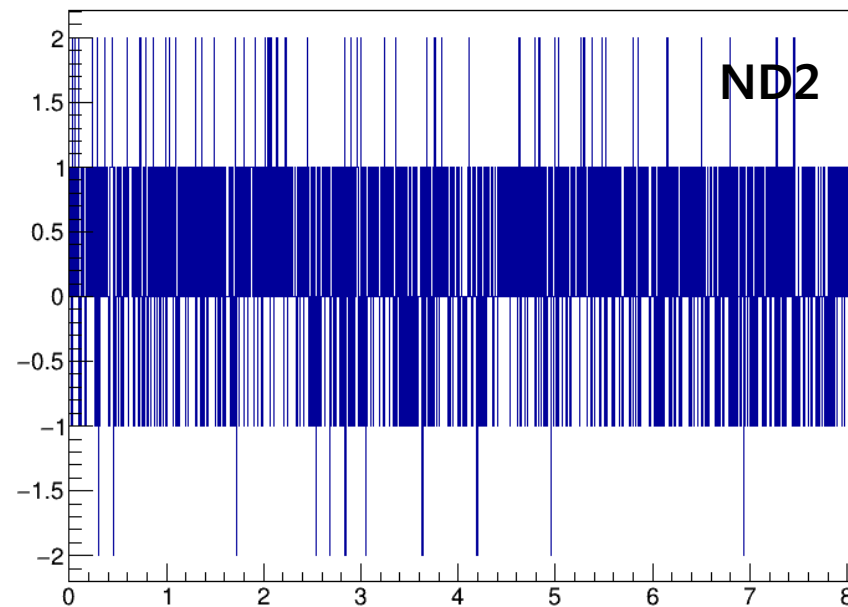
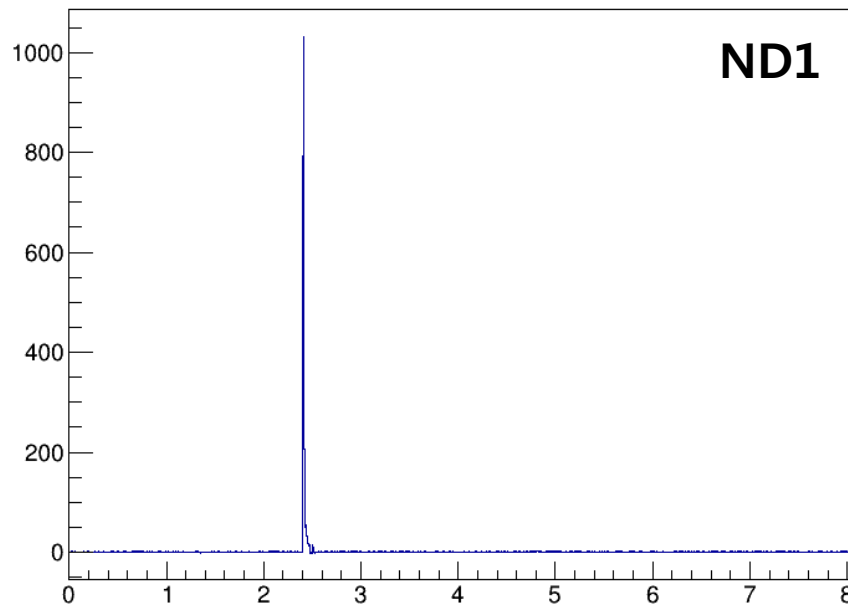
FACD 4

Ch 1 : ND1

Ch 2 : ND2

```
UCB
PTRIG 1000          # pedestal trigger [ms]
CW 256
TRGON 1 # 1 normal, 2 ptrig, 4 ext trig, ....
MTHRF 1 # 2 for NaI trigger
PSCF 1
END
```

```
FADCT 4 4
ENABLED 1
CW 200
CID 1 2 3 4
PID 1 2 3 4
TLT 1+2+3+4
POL 0
RL 64
THR 200 200 200 200
DTIME 0
DLY 3000
DACOFF 3500
TM 1
PCT 1
PCI 200
PWT 50
ZERO 0
END
```



both

FACD 3

Ch 1 : NaI PMT1

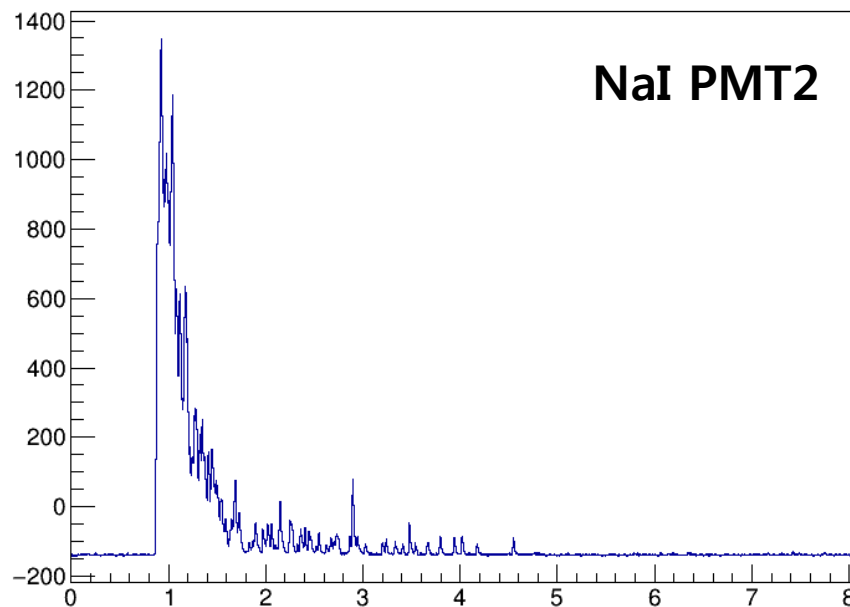
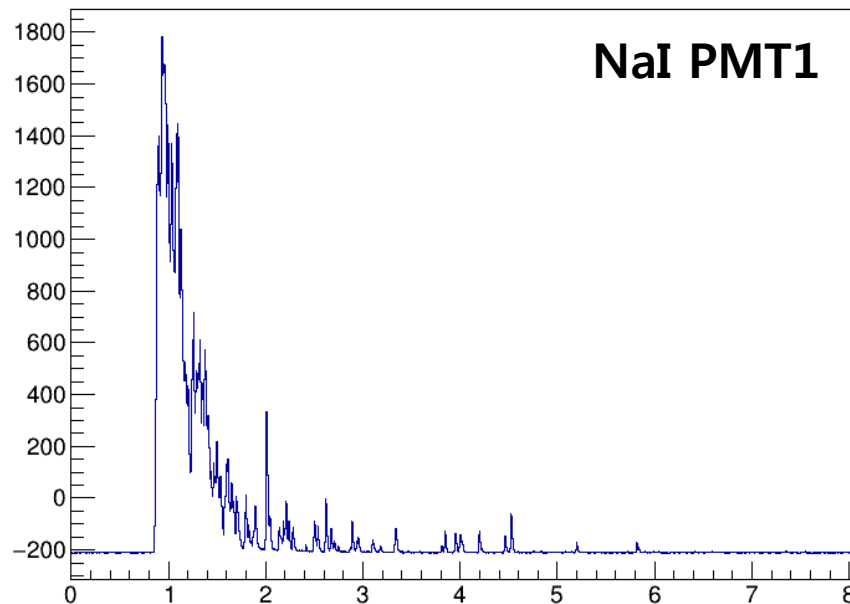
Ch 2 : NaI PMT2

Ch 3 : ND1

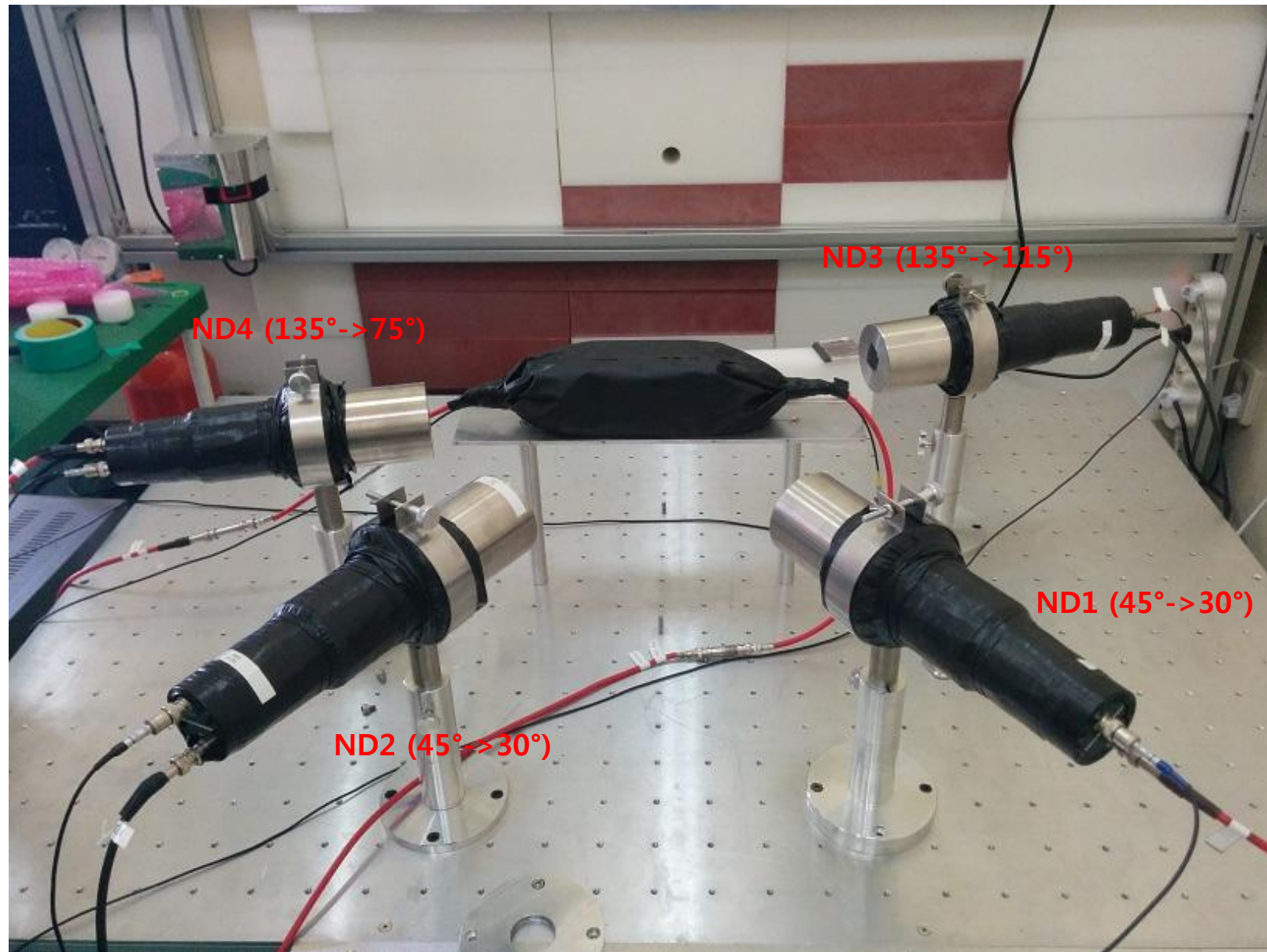
Ch 4 : ND2

```
TCB
PTRIG 1000      # pedestal trigger [ms]
CW 256
TRGON 1 # 1 normal, 2 ptrig, 4 ext trig, ....
MTHRF 3 # 2 for NaI trigger
PSCF 1
END
```

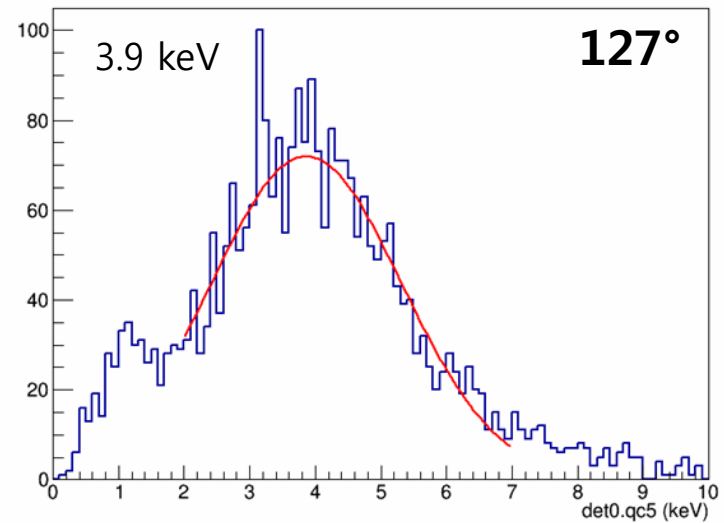
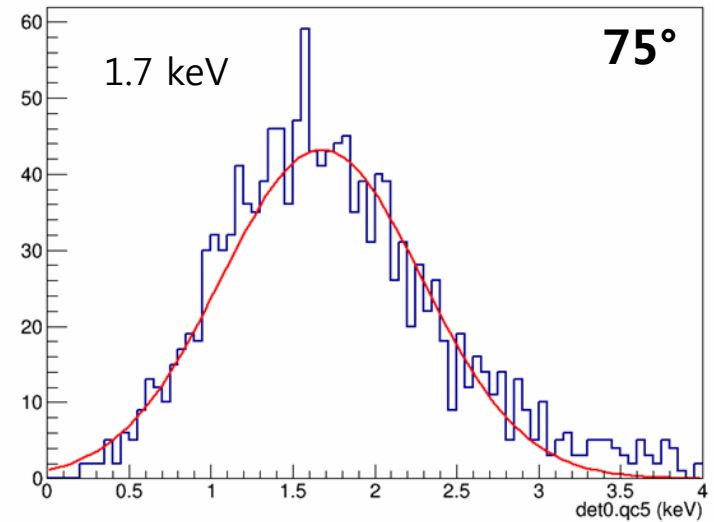
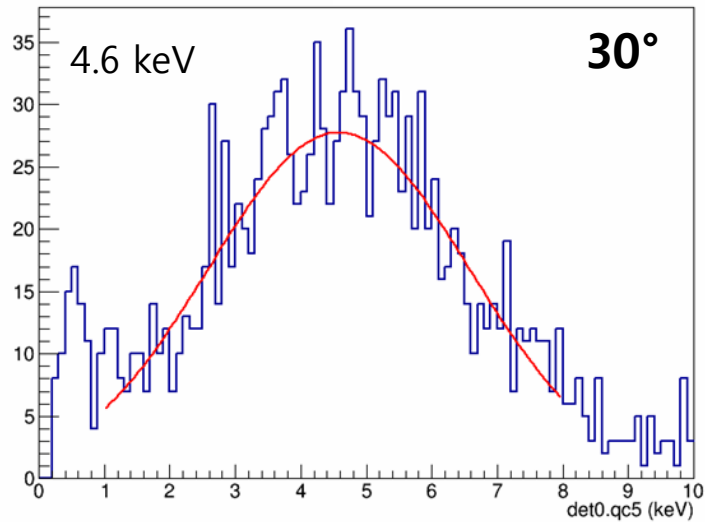
```
FADCT 3 4
ENABLED 1
CW 200
CID 1 2 3 4
PID 1 2 3 4
TLT 1x2+3+4
POL 0
RL 64
THR 15 15 200 200
DTIME 0
DLY 3000
DACOFF 3500
TM 1
PCT 1
PCI 200
PWT 50
ZERO 0
END
```



Arranged neutron detector position

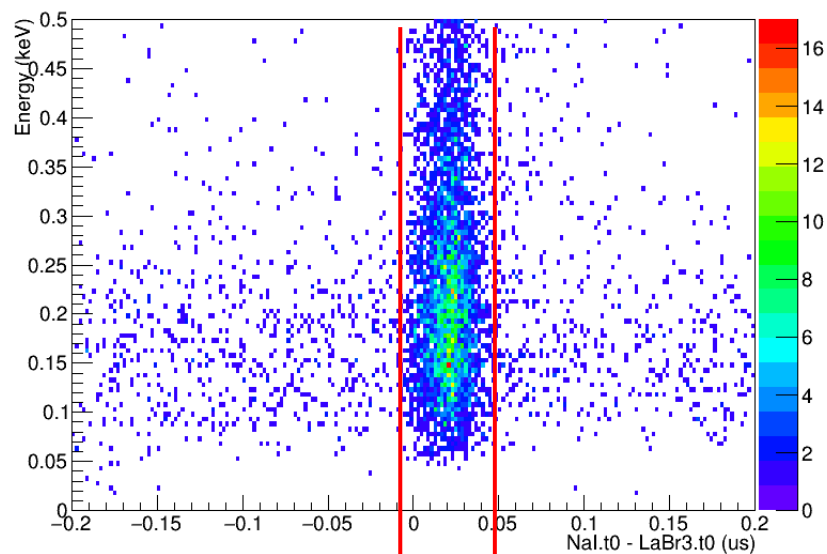


Expected energy spectrum

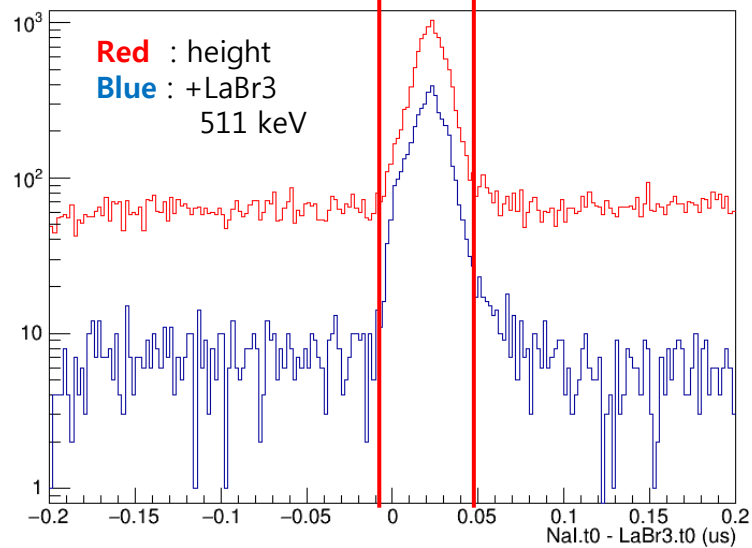
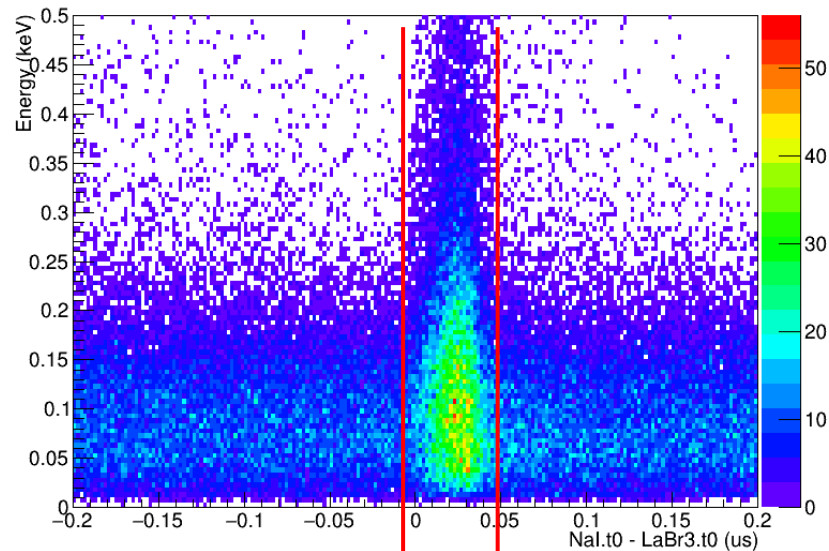


0.0~0.5 keV

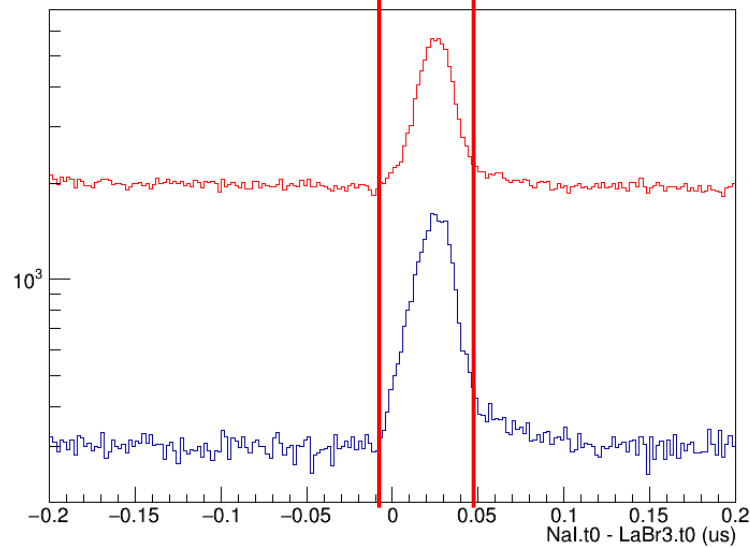
NaI triggered



LaBr3 triggered



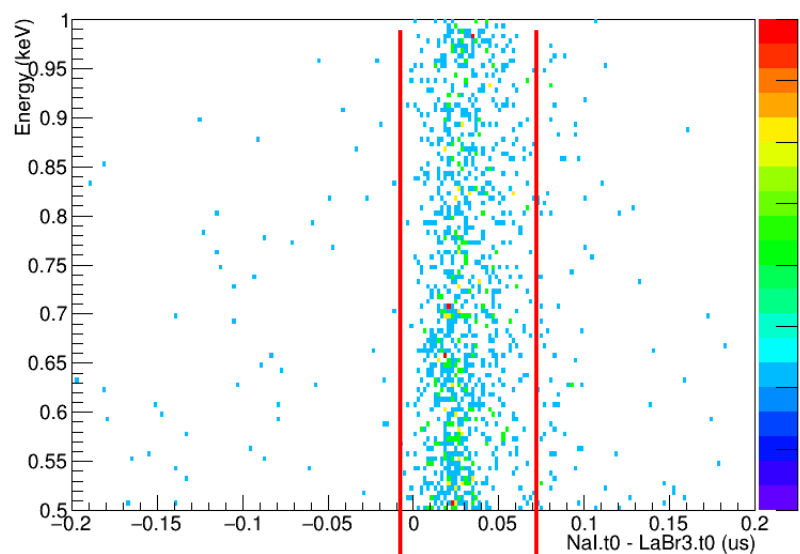
-0.01 ~ 0.05



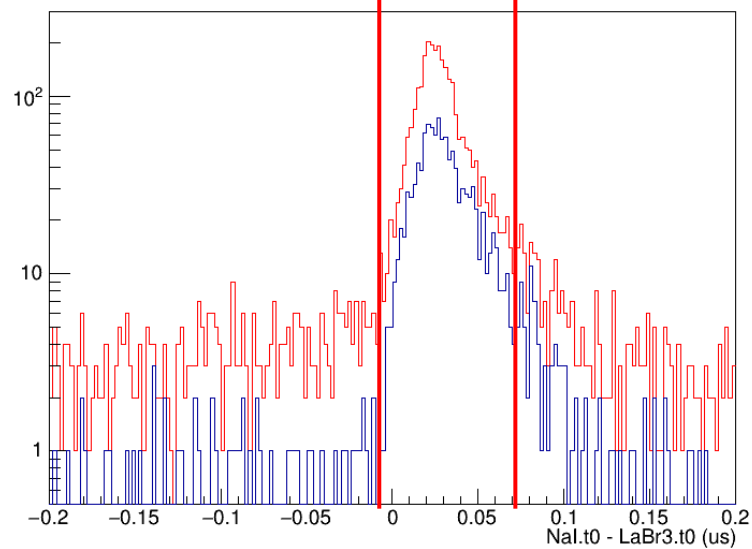
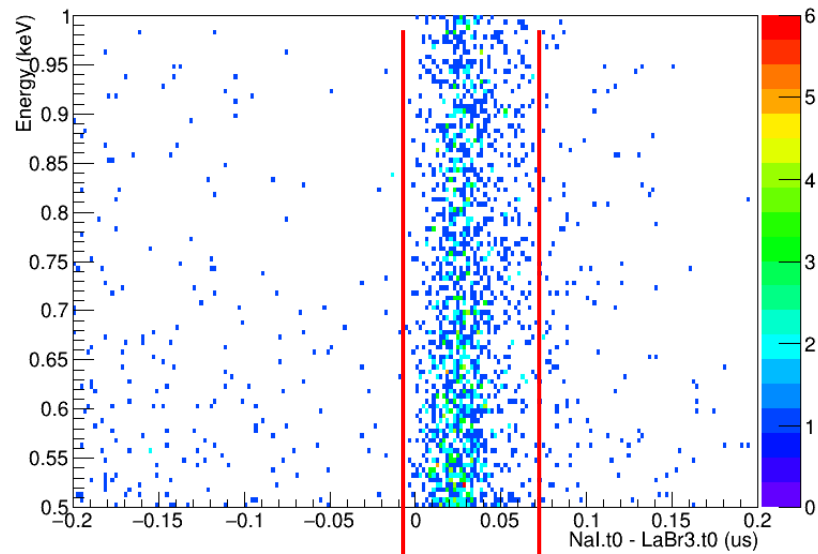
-0.01 ~ 0.05

0.5~1.0 keV

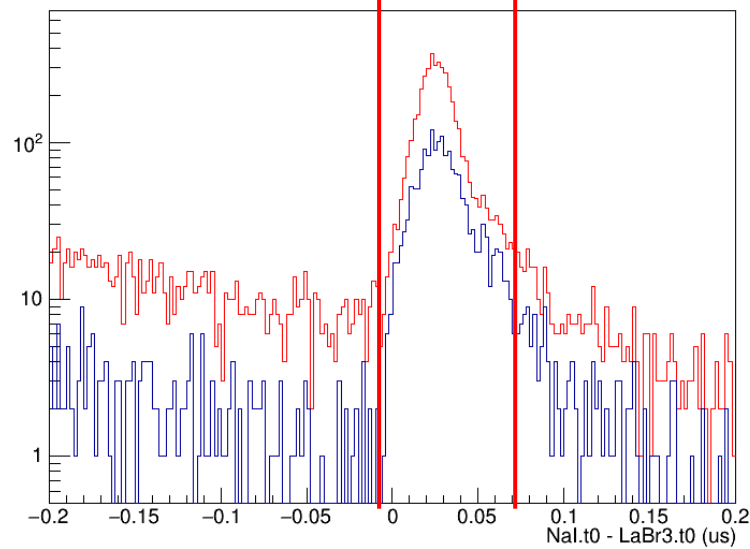
NaI triggered



LaBr3 triggered



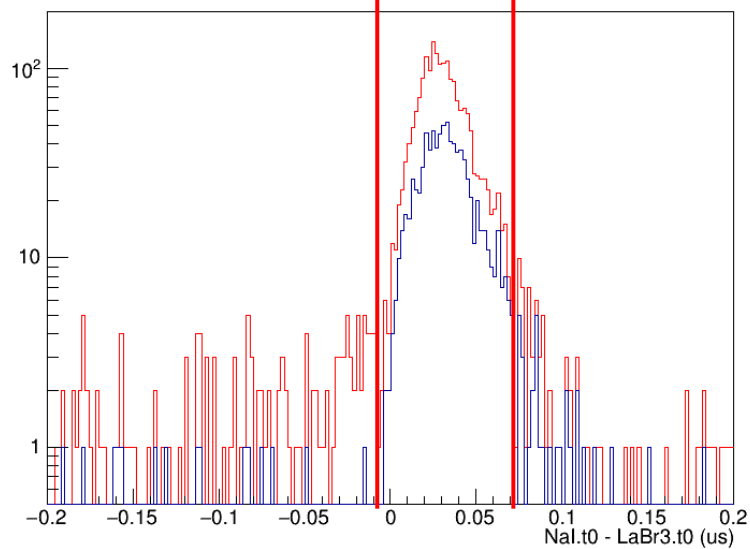
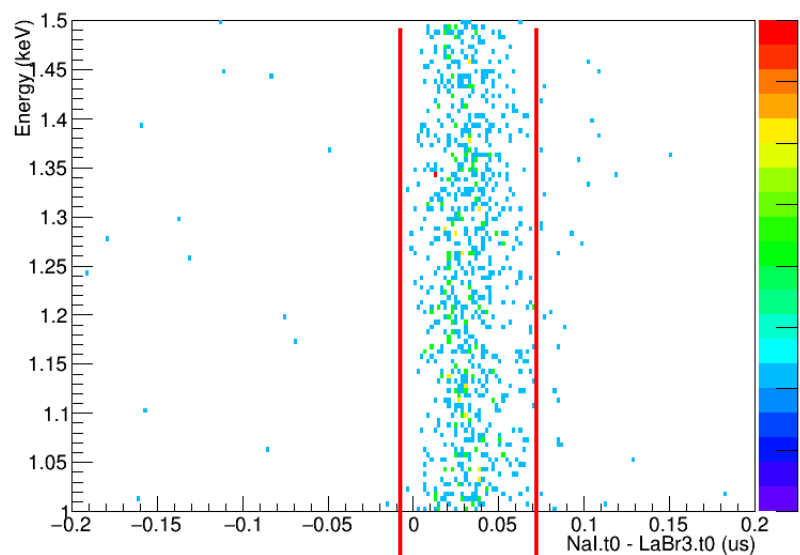
-0.01 ~ 0.07



-0.01 ~ 0.07

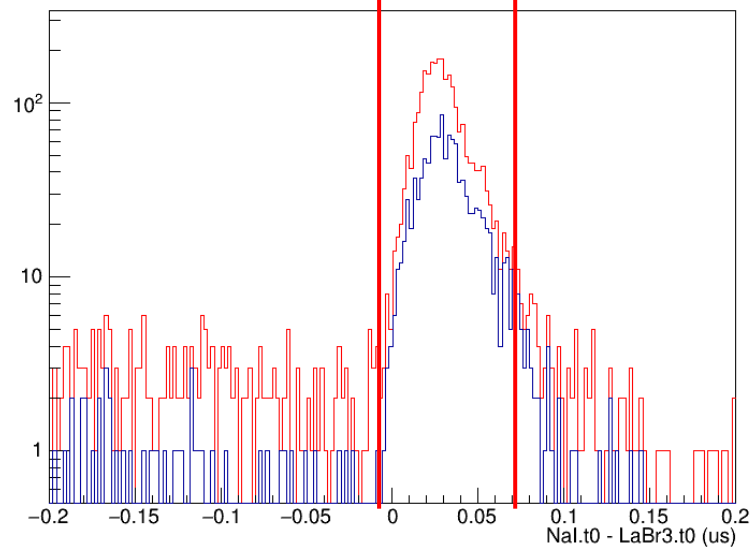
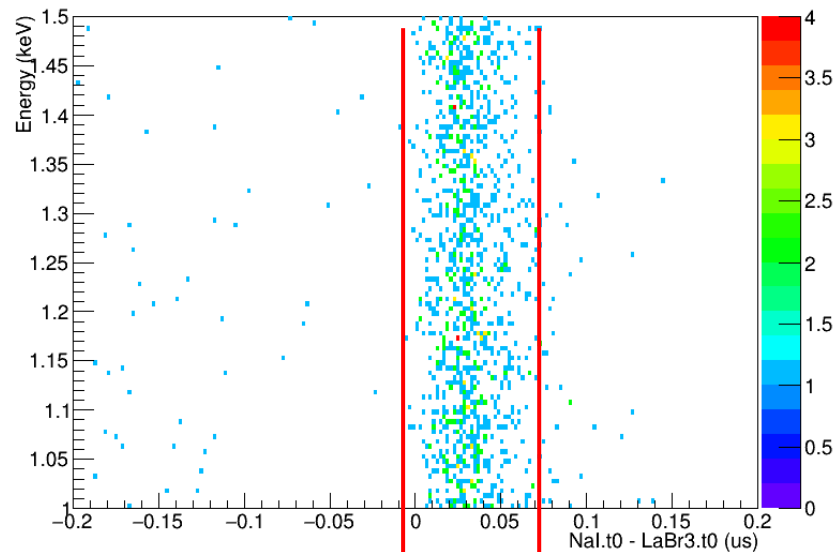
1.0~1.5 keV

NaI triggered



-0.01 ~ 0.07

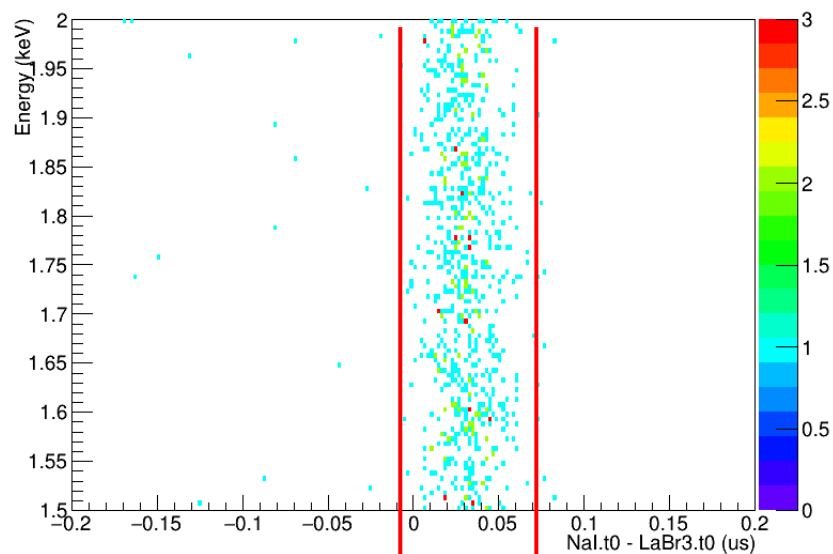
LaBr3 triggered



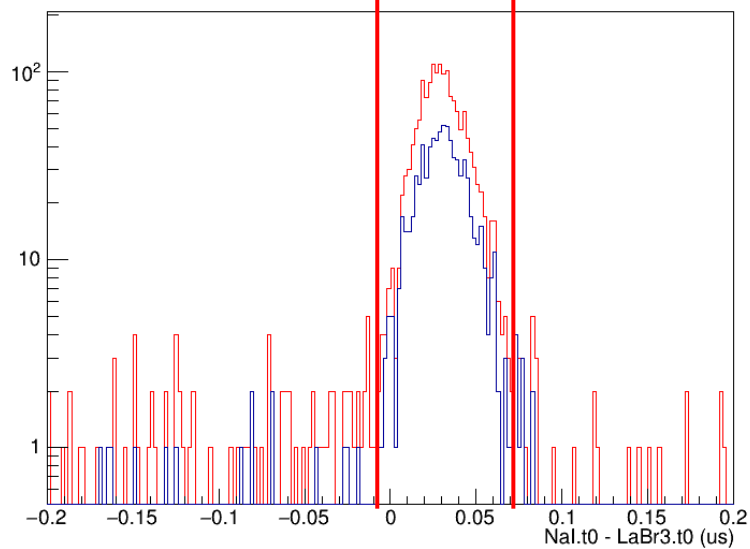
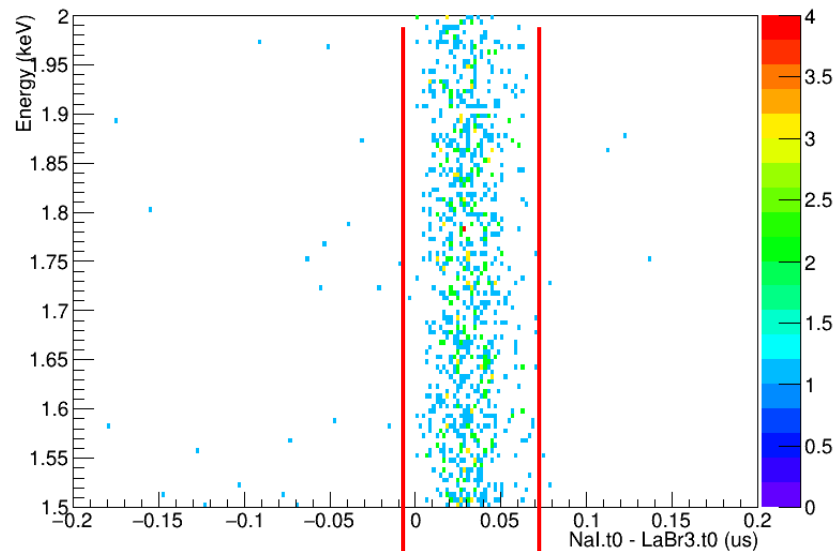
-0.01 ~ 0.07

1.5~2.0 keV

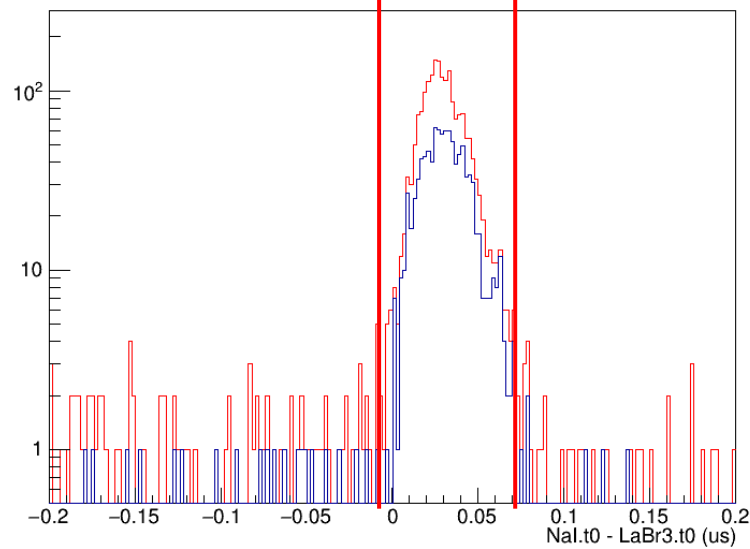
NaI triggered



LaBr3 triggered



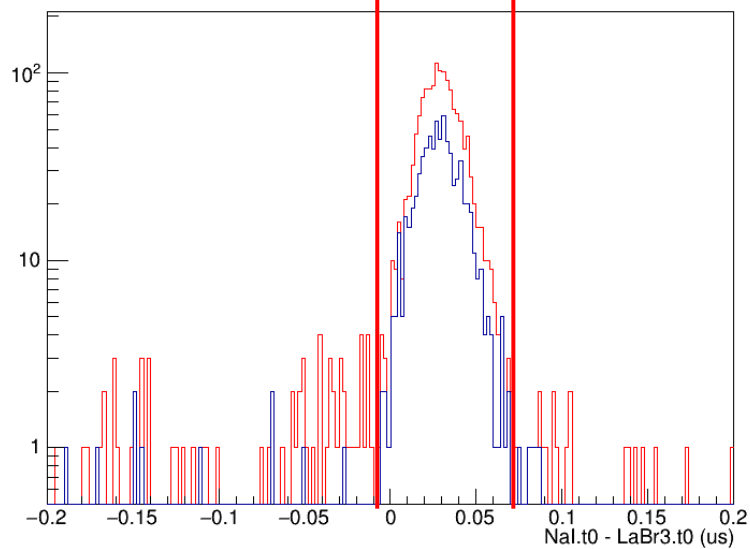
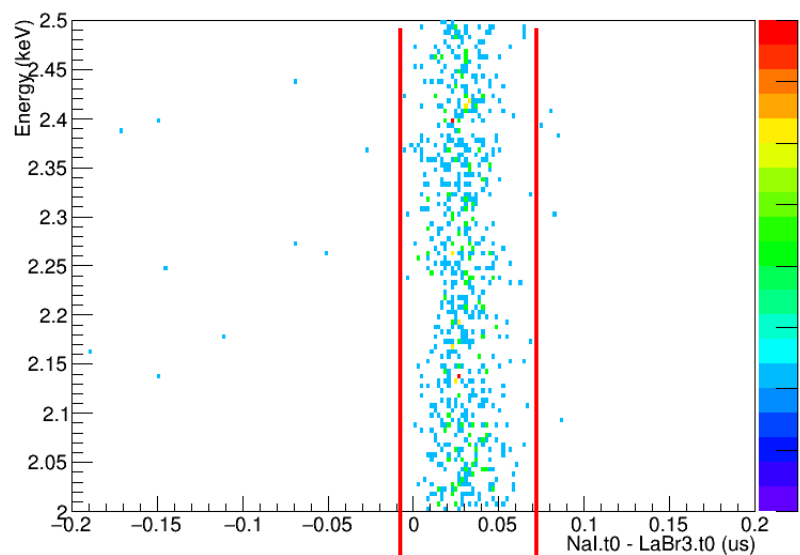
-0.01 ~ 0.07



-0.01 ~ 0.07

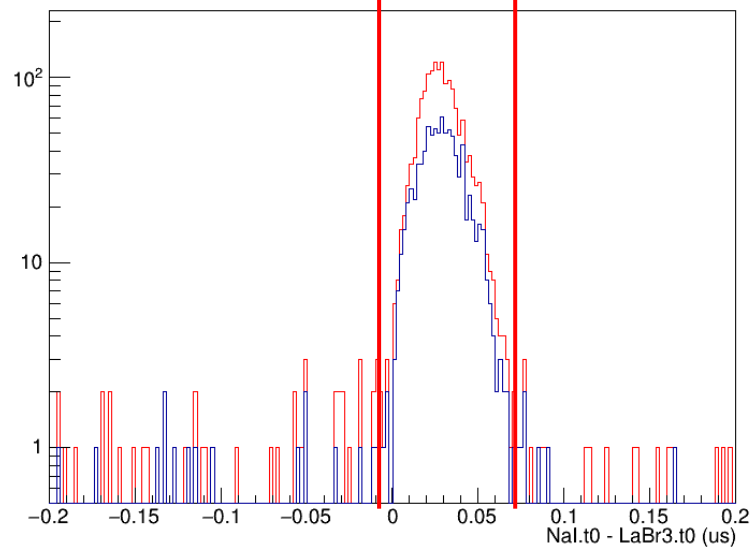
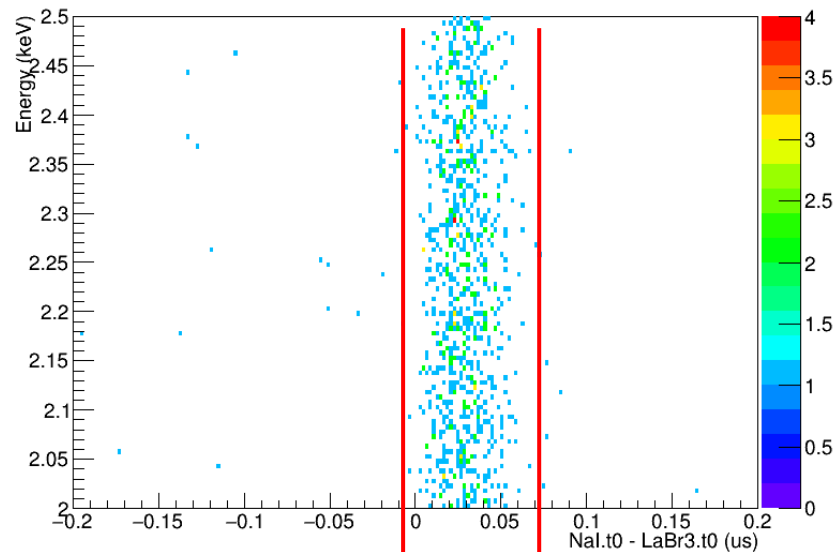
2.0~2.5 keV

NaI triggered



-0.01 ~ 0.07

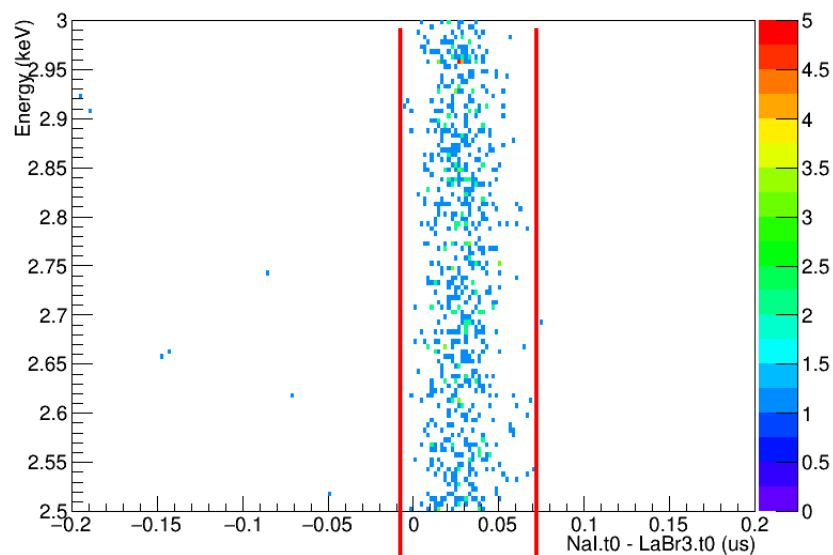
LaBr3 triggered



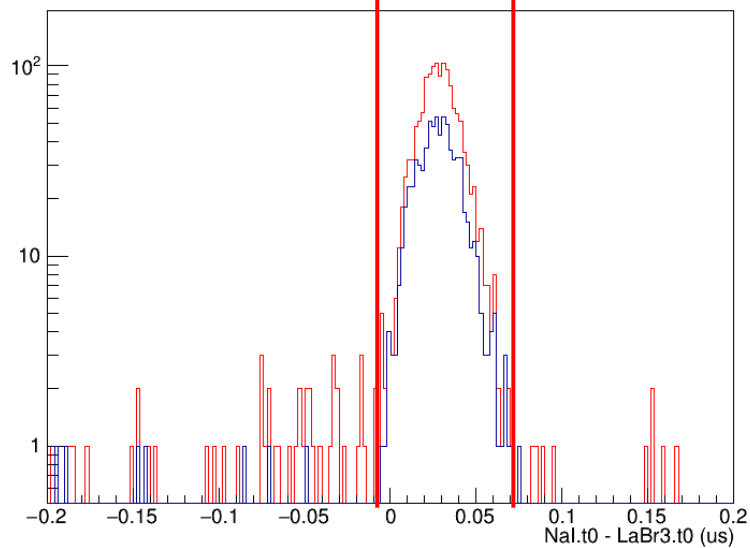
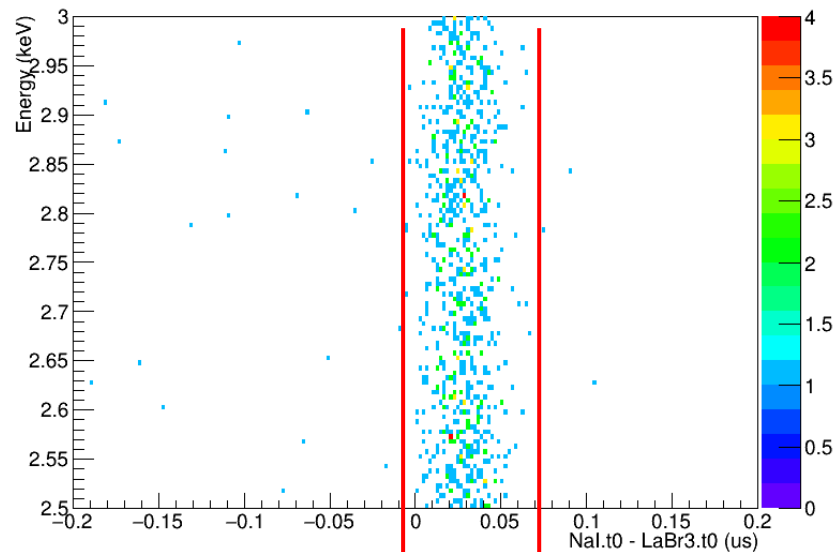
-0.01 ~ 0.07

2.5~3.0 keV

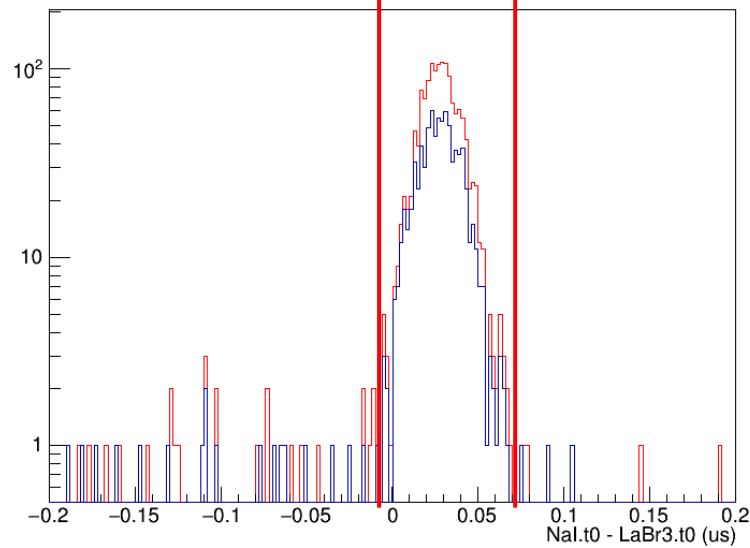
NaI triggered



LaBr3 triggered



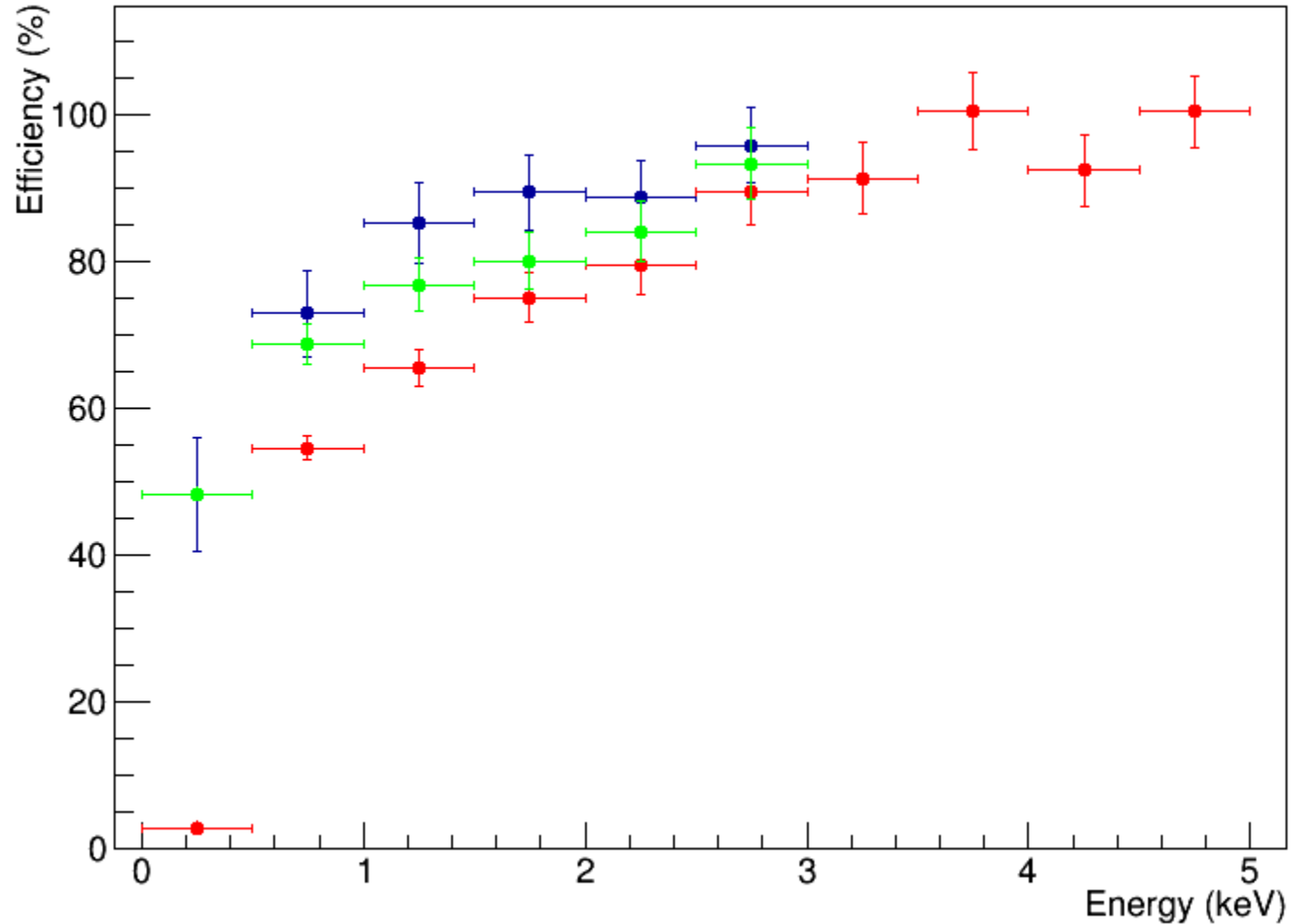
-0.01 ~ 0.07



-0.01 ~ 0.07

Trigger efficiency

Red : w/o DAMA, qc asymmetry cut
Blue : with DAMA, qc asymmetry cut
Green : with time difference cut



NaI triggered

LaBr3 triggered

Energy	Min bin	Max bin	forward	backward	coin.		Min bin	Max bin	forward	backward	coin.		efficiency	
0	96	125	692	542	4371		96	125	28782	23562	26009			
0.5			7.21	7.23	3952.385				299.81	314.16	8203.798		48.2	0.9
0.5	96	135	52	93	1099		96	135	191	141	1651			
1			0.54	1.43	1022.075				1.99	2.17	1488.806		68.7	2.8
1	96	135	15	36	844		96	135	46	55	1114			
1.5			0.16	0.55	816.3063				0.48	0.85	1062.313		76.8	3.6
1.5	96	135	15	11	780		96	135	21	10	972			
2			0.16	0.17	767.3063				0.22	0.15	957.4688		80.1	3.9
2	96	135	10	5	730		96	135	16	8	871			
2.5			0.10	0.08	722.9375				0.17	0.12	859.7		84.1	4.2
2.5	96	135	7	2	745		96	135	19	3	804			
3			0.07	0.03	740.9563				0.20	0.05	794.4813		93.3	4.8