24th/July/2006   H. Tatsuno

E570 meeting report

New calibrations
and
Comparisons of the first half of a cycle
with the second half of one

New Calibrations

version 6 : 2 parts

version 7 : 4 parts

version 8 : 8 parts

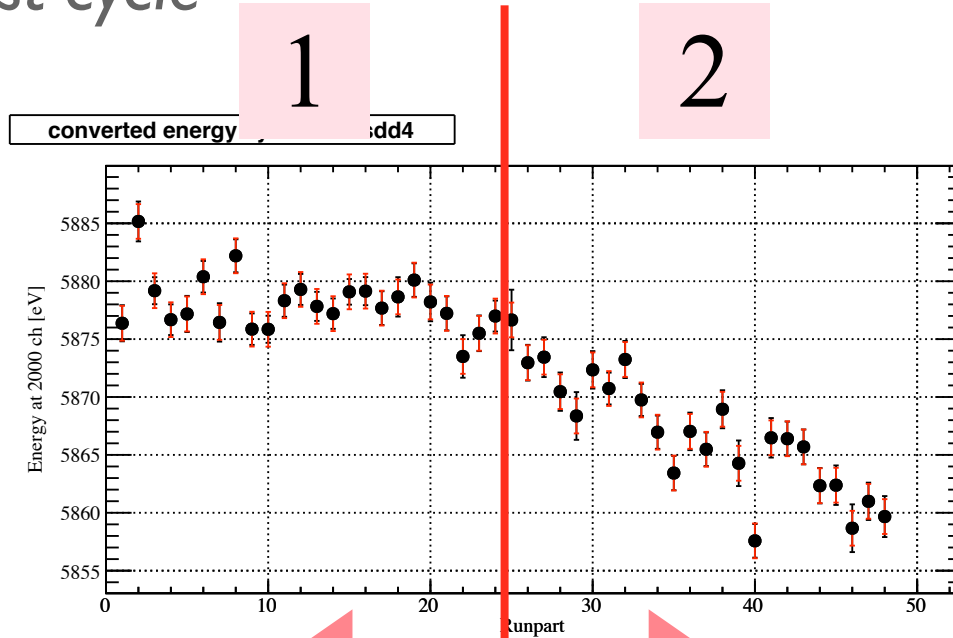with considering the gain jumps
of SDD3 and SDD5 in 2nd cycle
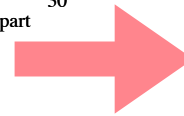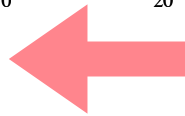
gain drifts of version 4,
1st cycle

Version 6

the partition of
1st cycle

2 parts

1   2

sdd4

converted energy ... sdd4

Energy at 2000 ch [eV]

5885
5880
5875
5870
5865
5860
5855

0   10   20   30   40   50
Runpart

the first half   ⬅   ➡   **the second half**

sdd5

converted energy cycle1 out sdd5

Energy at 2000 ch [eV]

5810
5800
5790
5780
5770
5760
5750
5740

0   10   20   30   40   50
Runpart
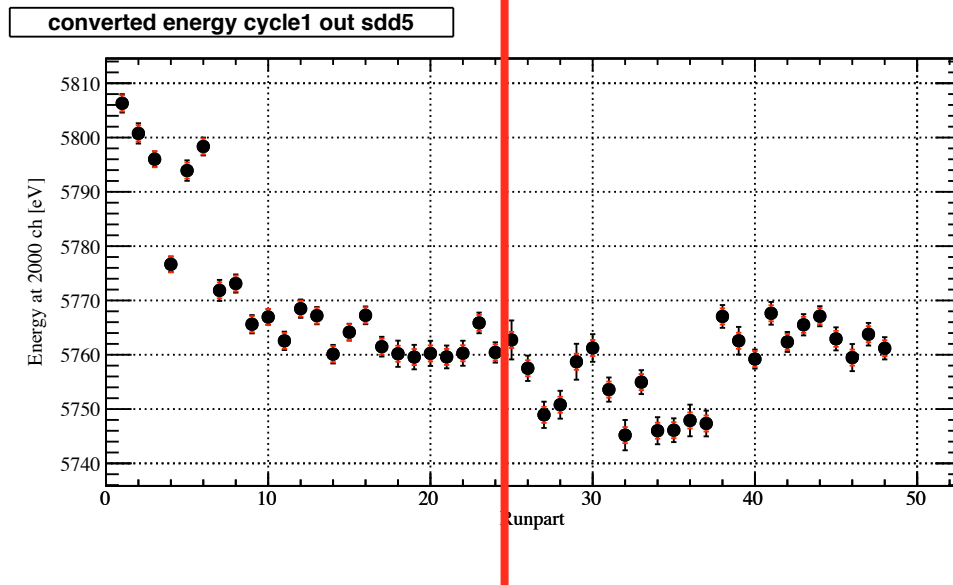
gain drifts of version 4, 2nd cycle

Version 6

1

2

the partition of 2nd cycle

2 parts

sdd3

the first half ← → the second half

sdd5

these gain jumps are considered
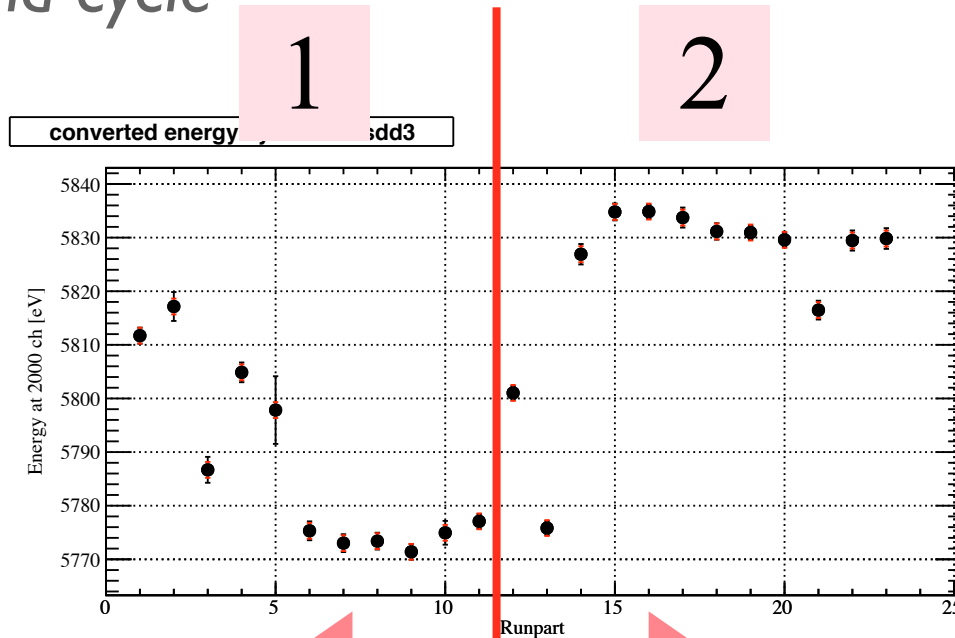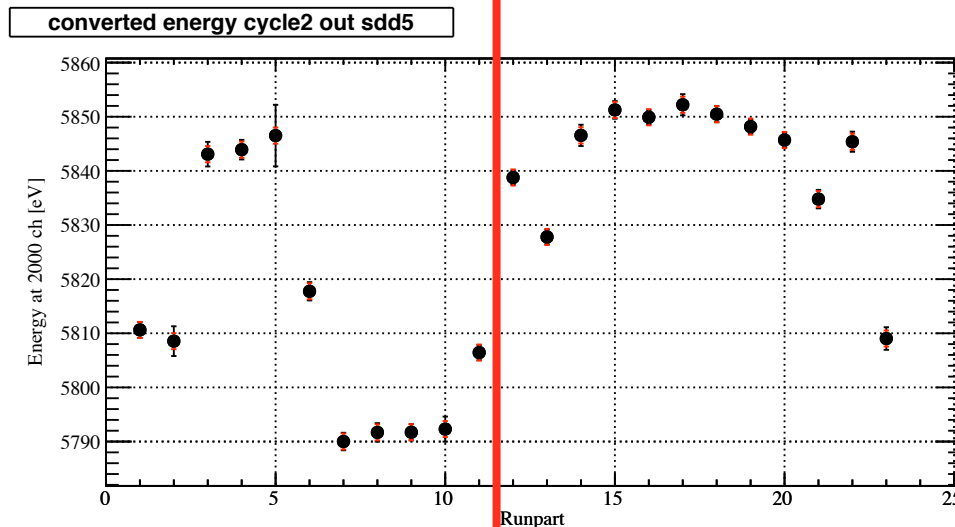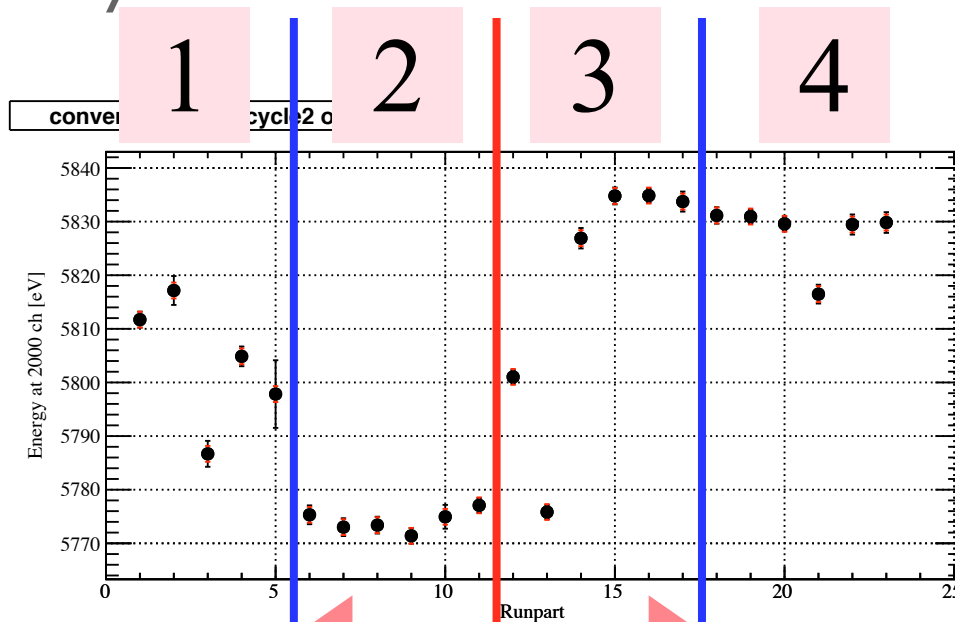
gain drifts of version 4, 2nd cycle
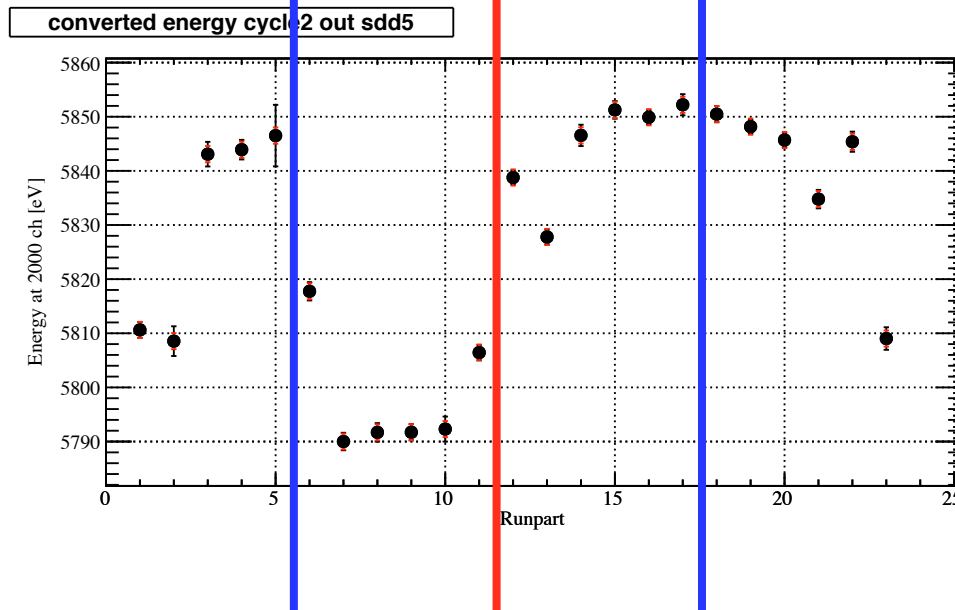
Version 7

the partition of 2nd cycle

4 parts

sdd3

sdd5

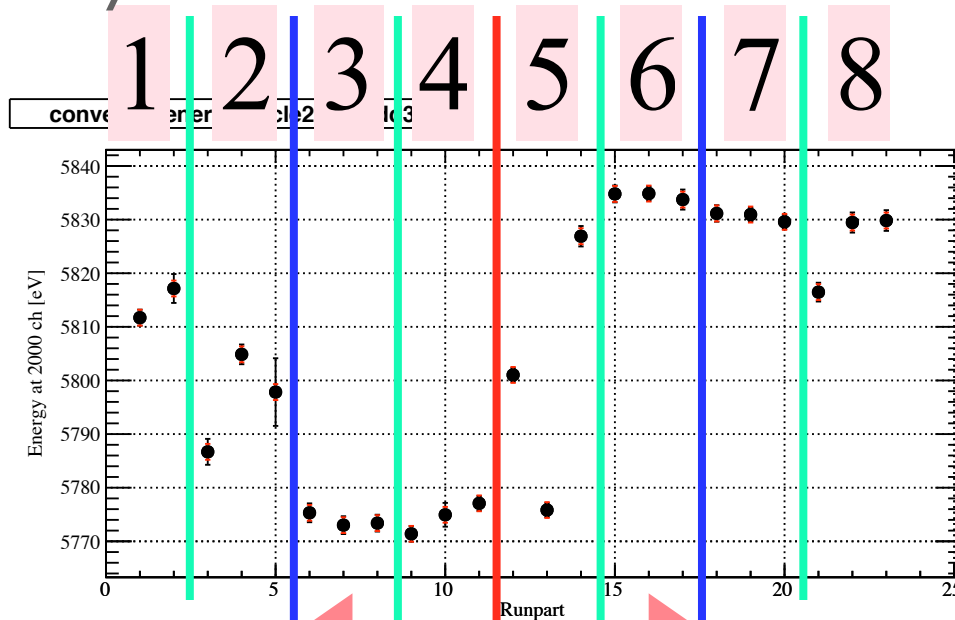the first half ⟵ ⟶ the second half

these gain jumps are considered

gain drifts of version 4,
2nd cycle

Version 8

the partition of
2nd cycle
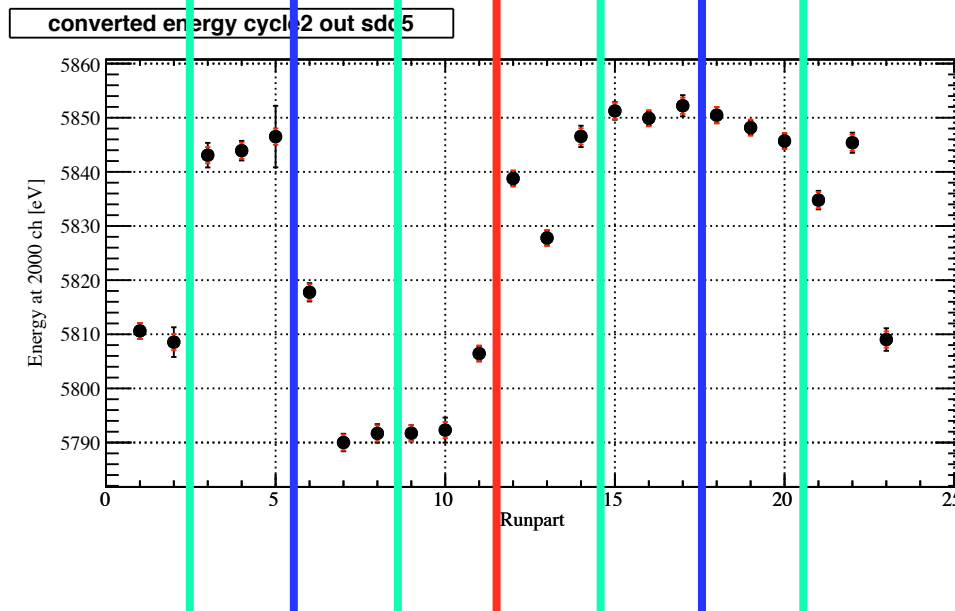
8 parts

1 2 3 4 5 6 7 8

sdd3

converted energy cycle2 out sdd3

the first half ⬅ ➡ the second half

sdd5

converted energy cycle2 out sdd 5

these gain
jumps are
considered

Fit result comparisons

1. the 1st half and the 2nd half of the runs

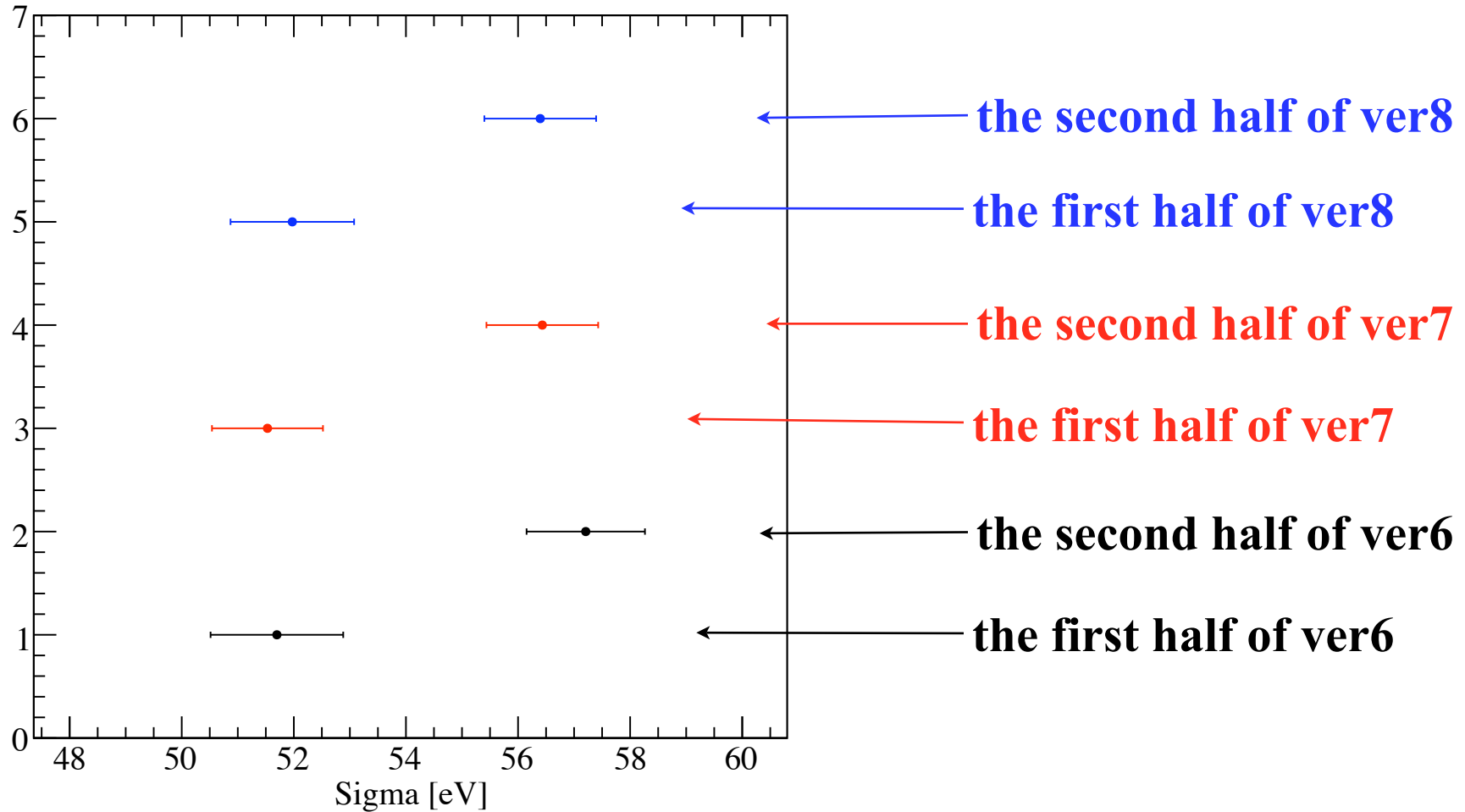2. calibration versions : ver6, ver7 and ver8

Fitting

self trigger

e549 trigger
(with vertex cuts)

TiKa1 sigma   Fano factor
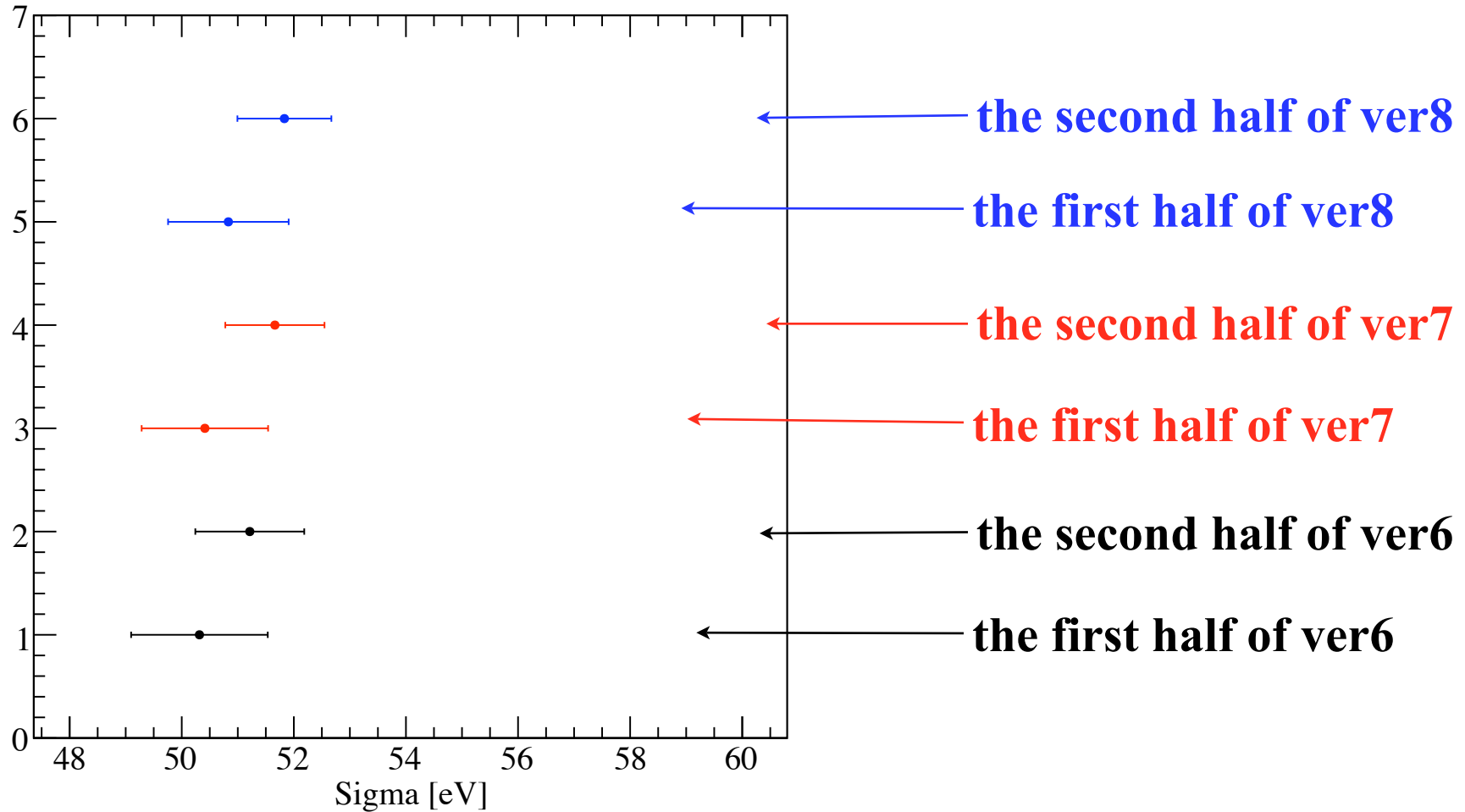
KHeX La sigma   Shift   Gamma

TiKa1 Sigma cycle1 self trig.
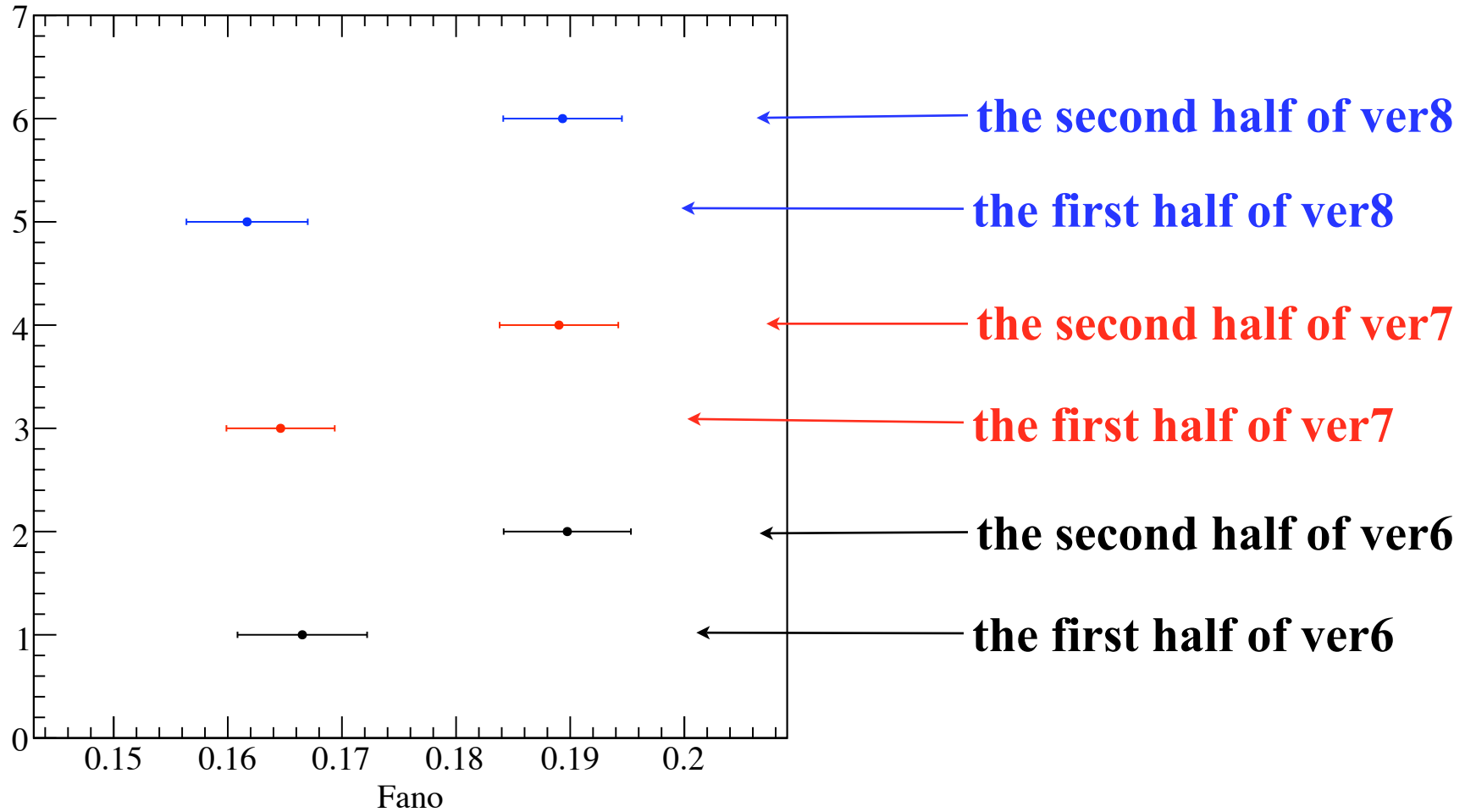
sigma TiKa1 self trig cycle1

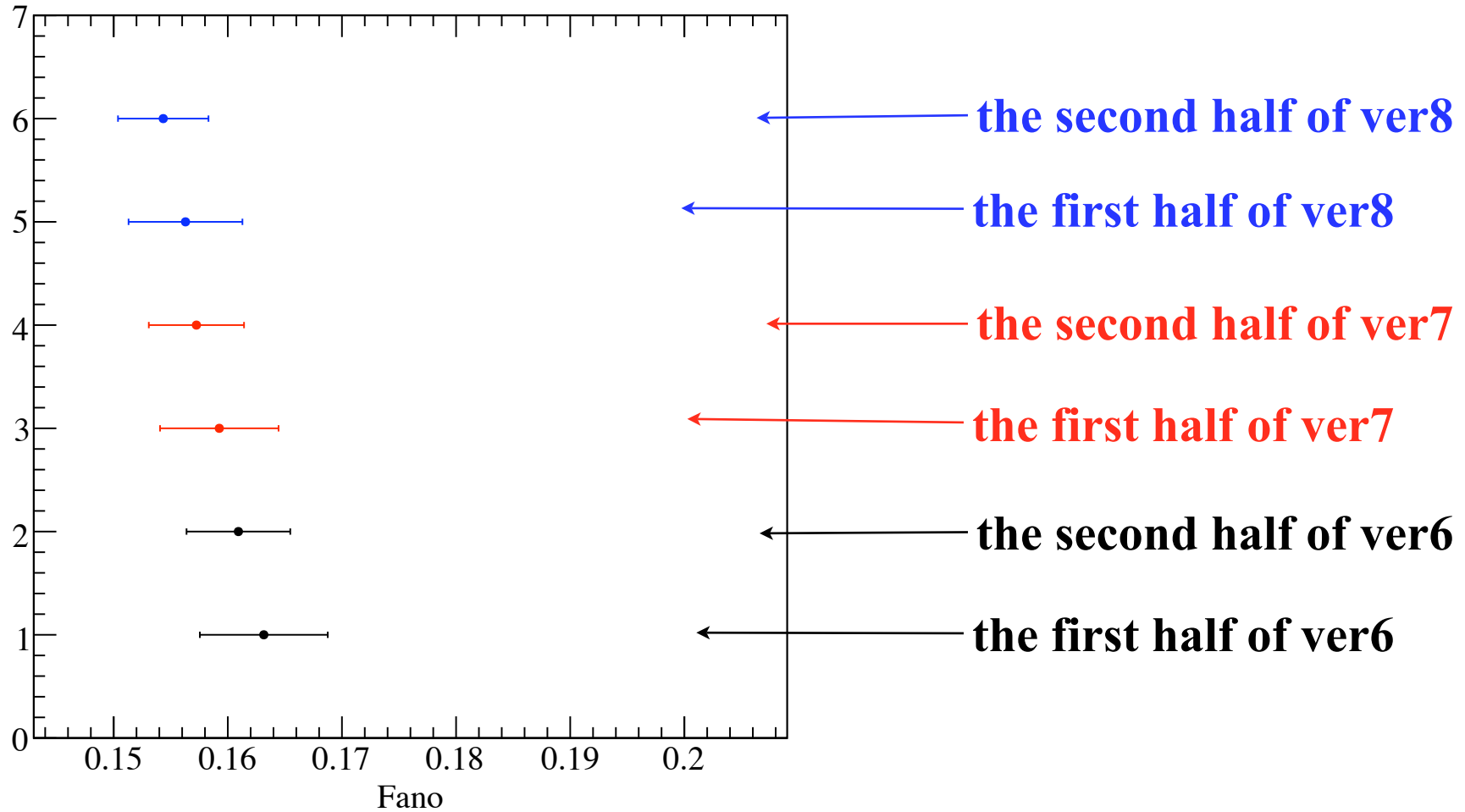# TiKa1 Sigma cycle2 self trig.

sigma TiKa1 self trig cycle2
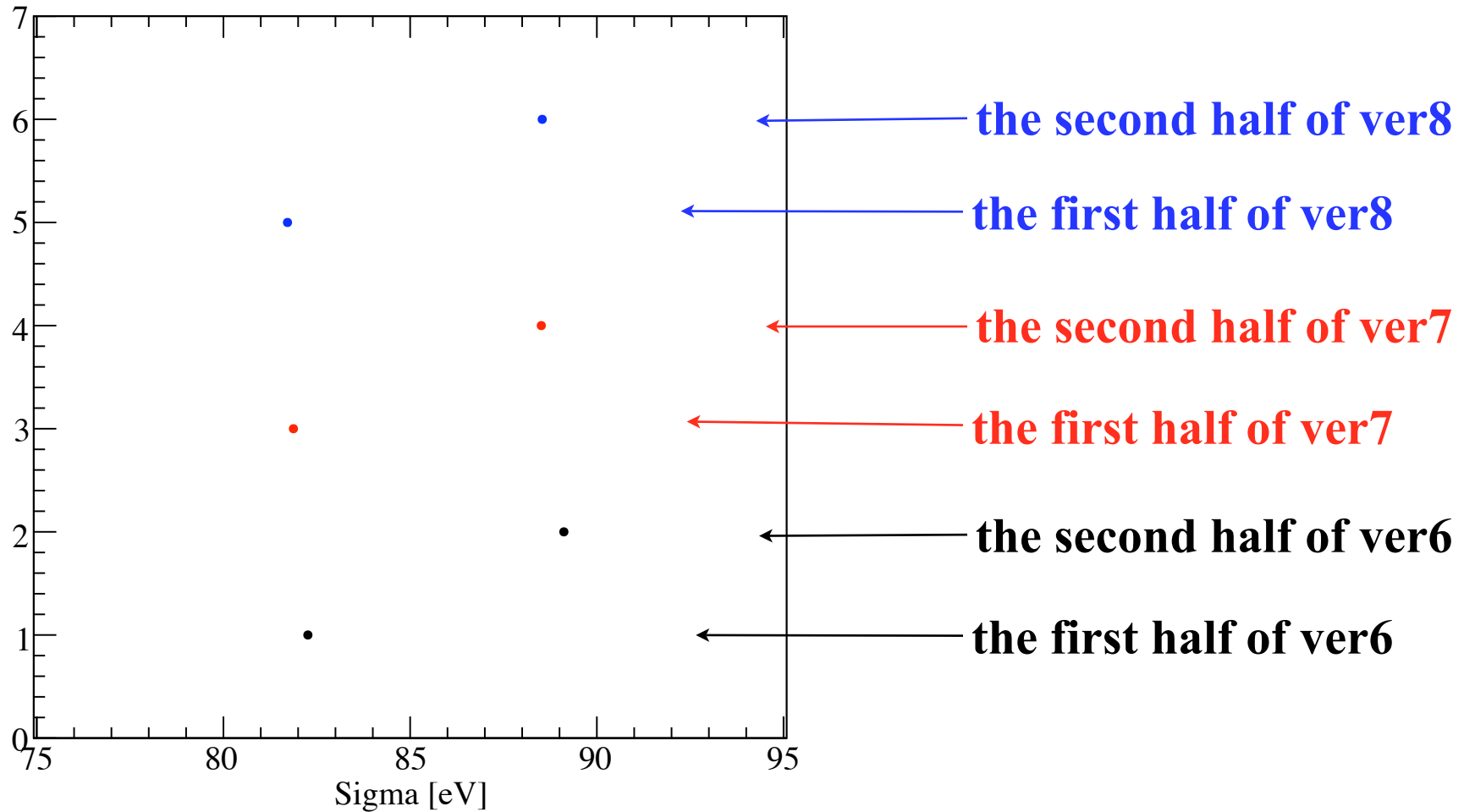
Fano factor cycle1 self trig.

Fano self trig cycle1

the second half of ver8

the first half of ver8

the second half of ver7

the first half of ver7

the second half of ver6

the first half of ver6

Fano

Fano factor cycle2 self trig.

Fano self trig cycle2

the second half of ver8

the first half of ver8

the second half of ver7
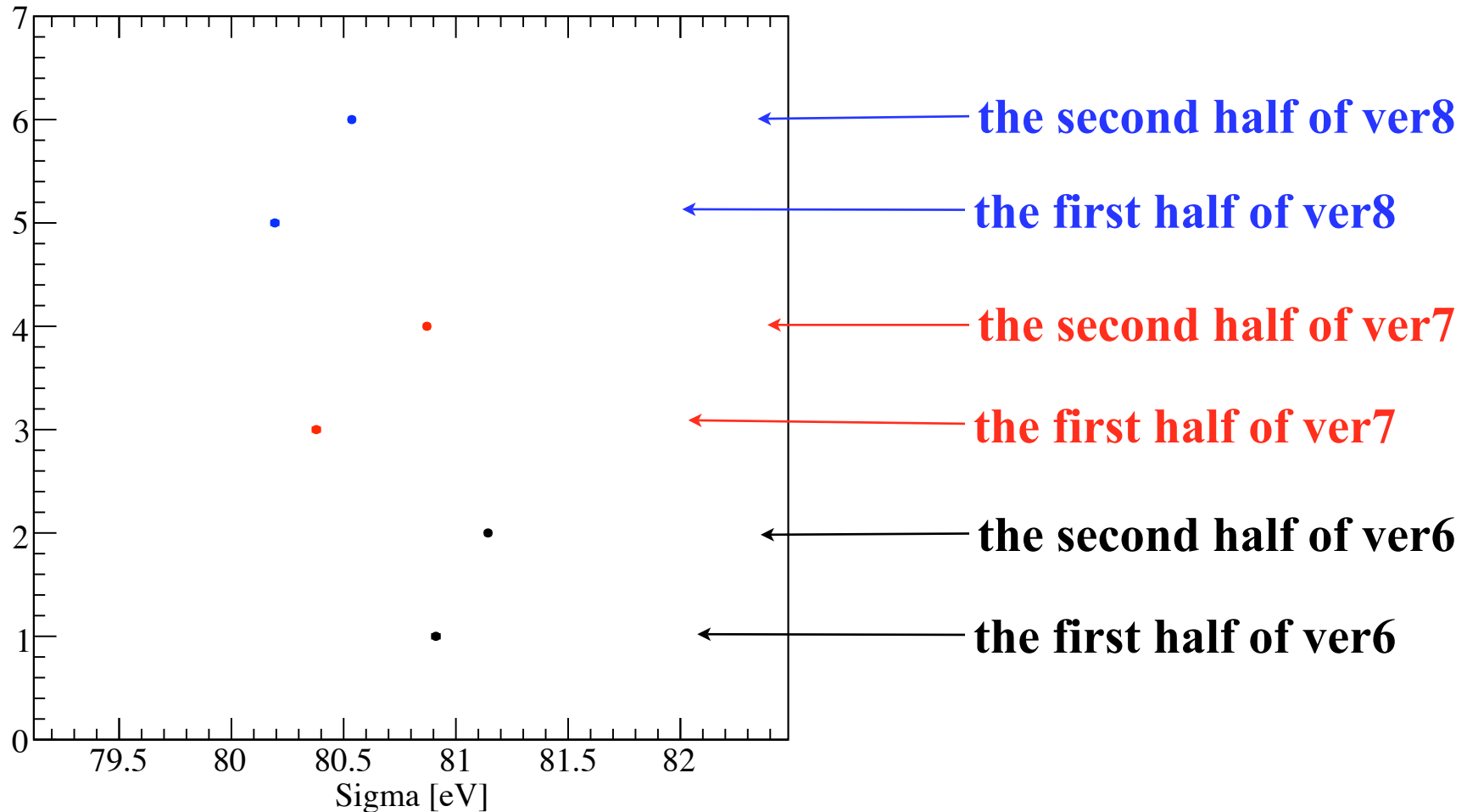
the first half of ver7

the second half of ver6

the first half of ver6

Fano

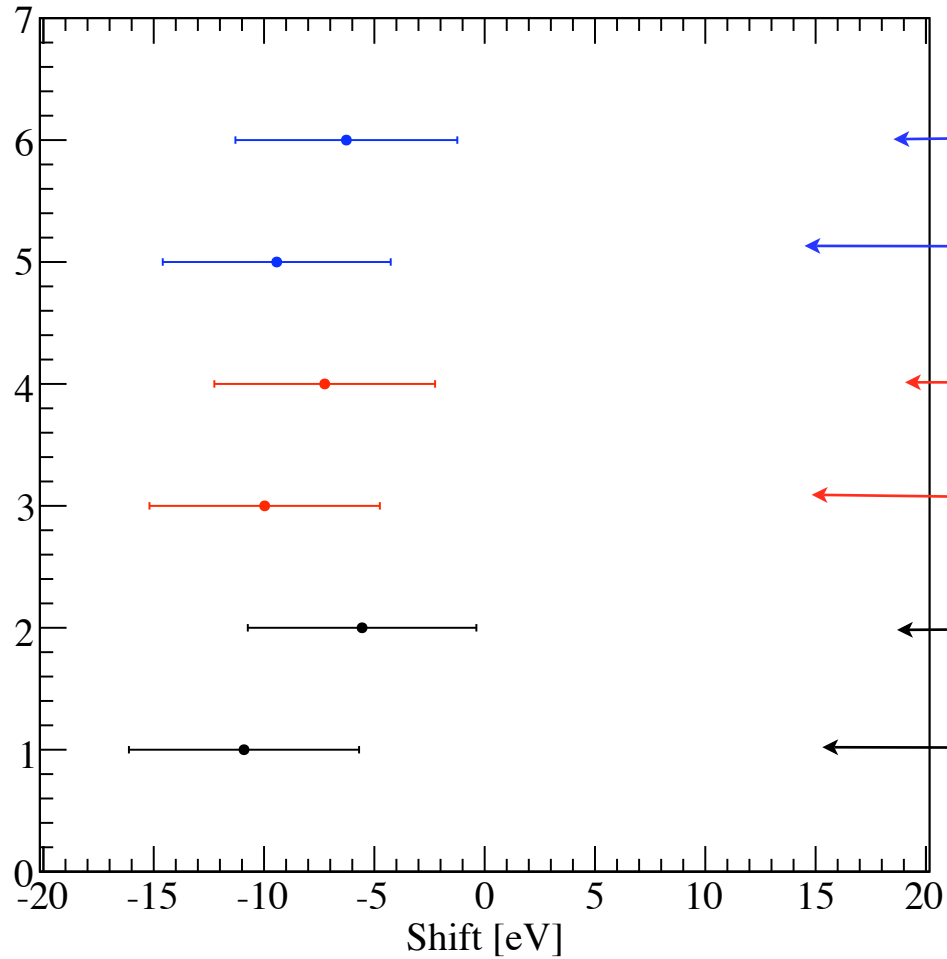# KHeXLa Sigma cycle1 e549 trig.

KHeXLa Sigma cycle1 e549 trig.

sigma KHeXLa e549 trig cycle2

the width of KHeXLa is slightly improved
in the both sides of all versions
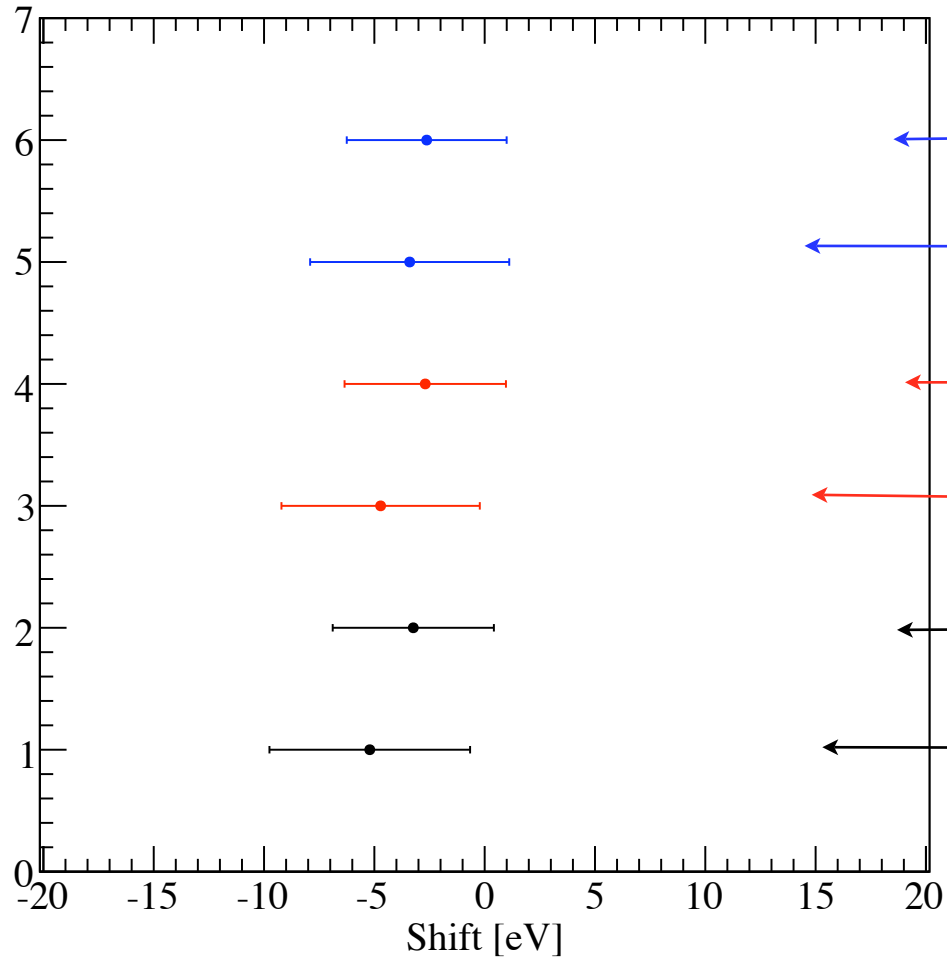
KHeXLa Shift cycle1 e549 trig.

KHeXLa Shift cycle2 e549 trig.

Superimposition of cycle1 and cycle2

consistent within 1 σ error.

KHeXLa gamma cycle1 e549 trig.

KHeXLa gamma cycle2 e549 trig.

Gamma KHeXLa e549 trig cycle2

the second half of ver8

the first half of ver8

the second half of ver7

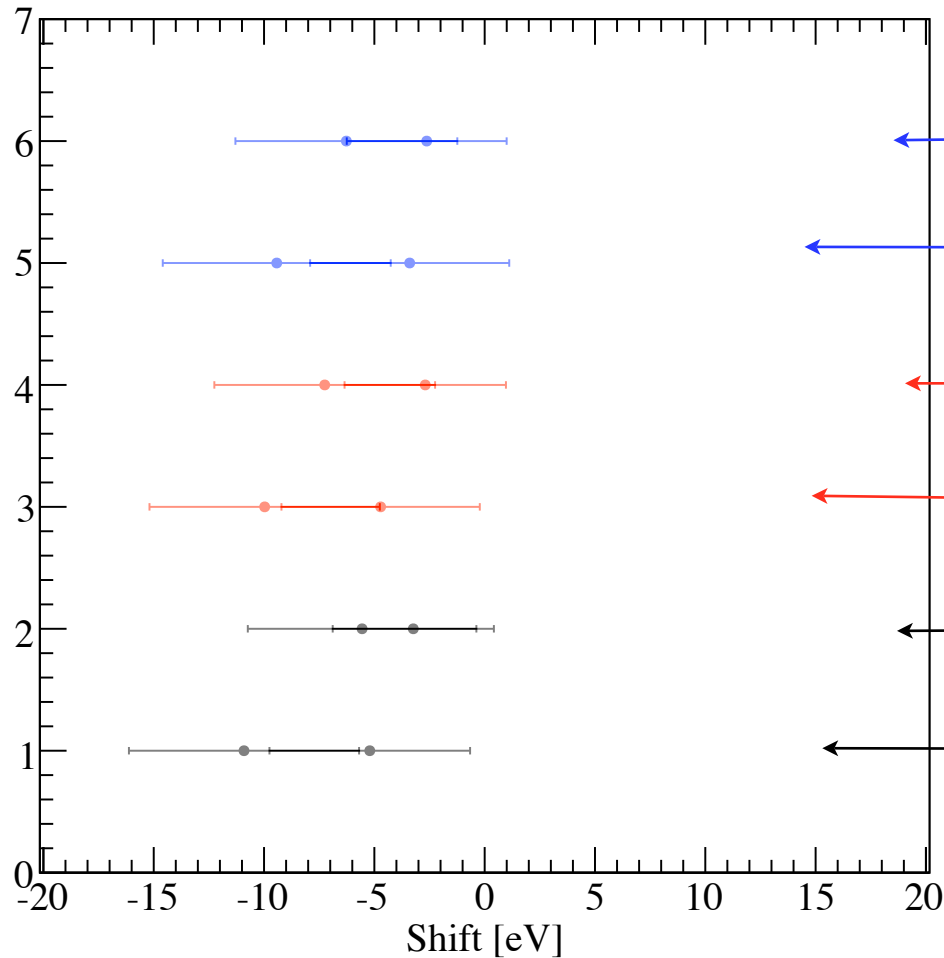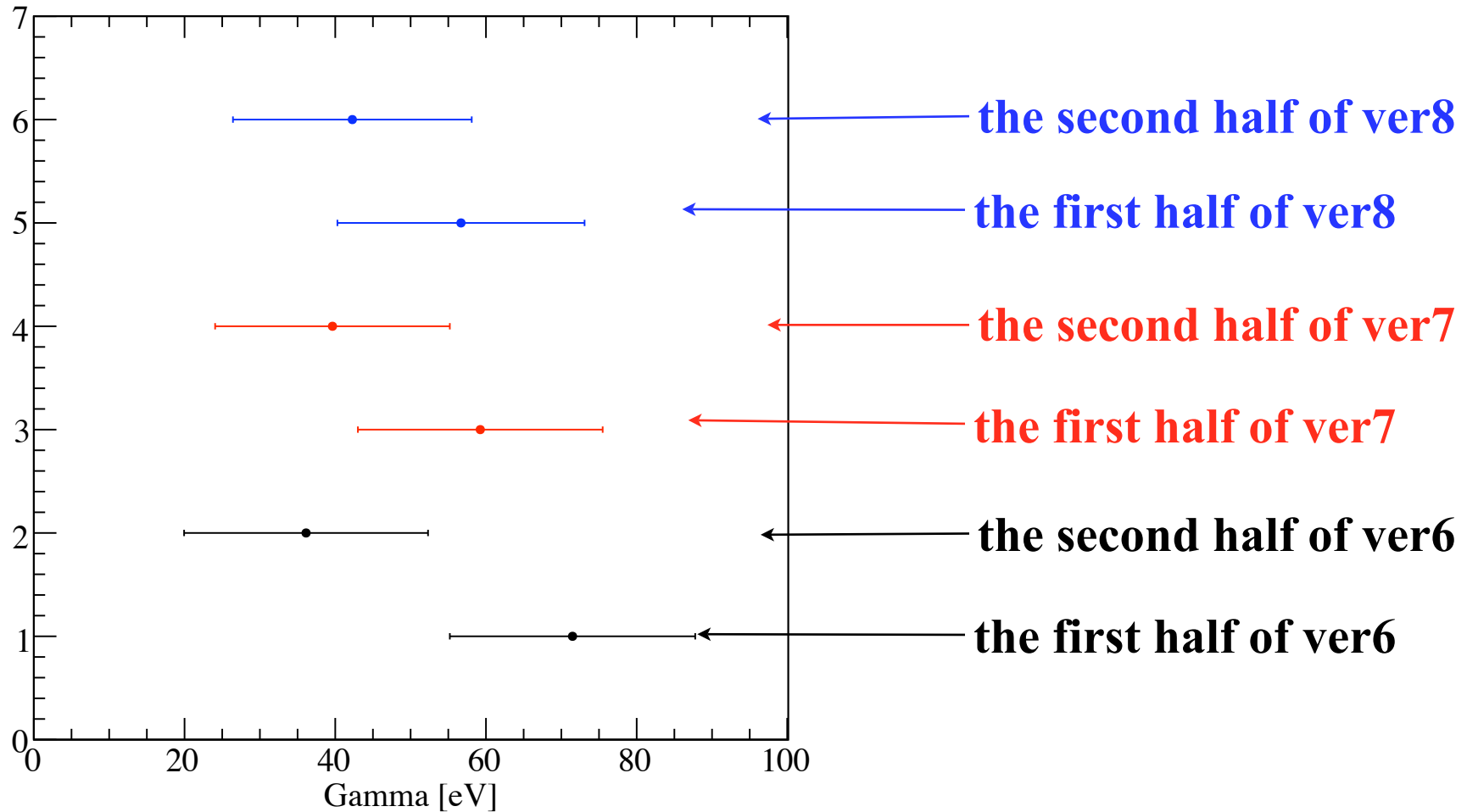the first half of ver7
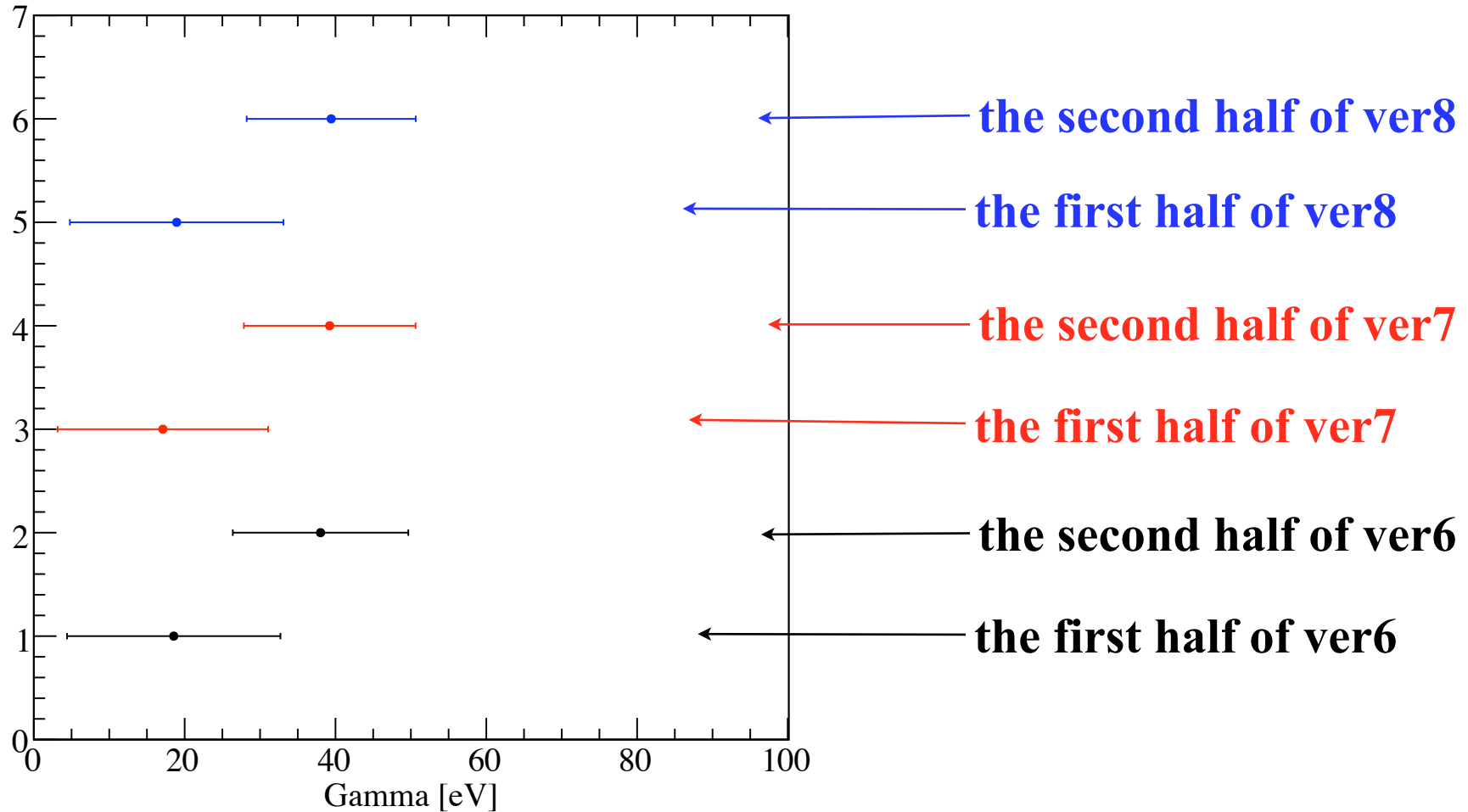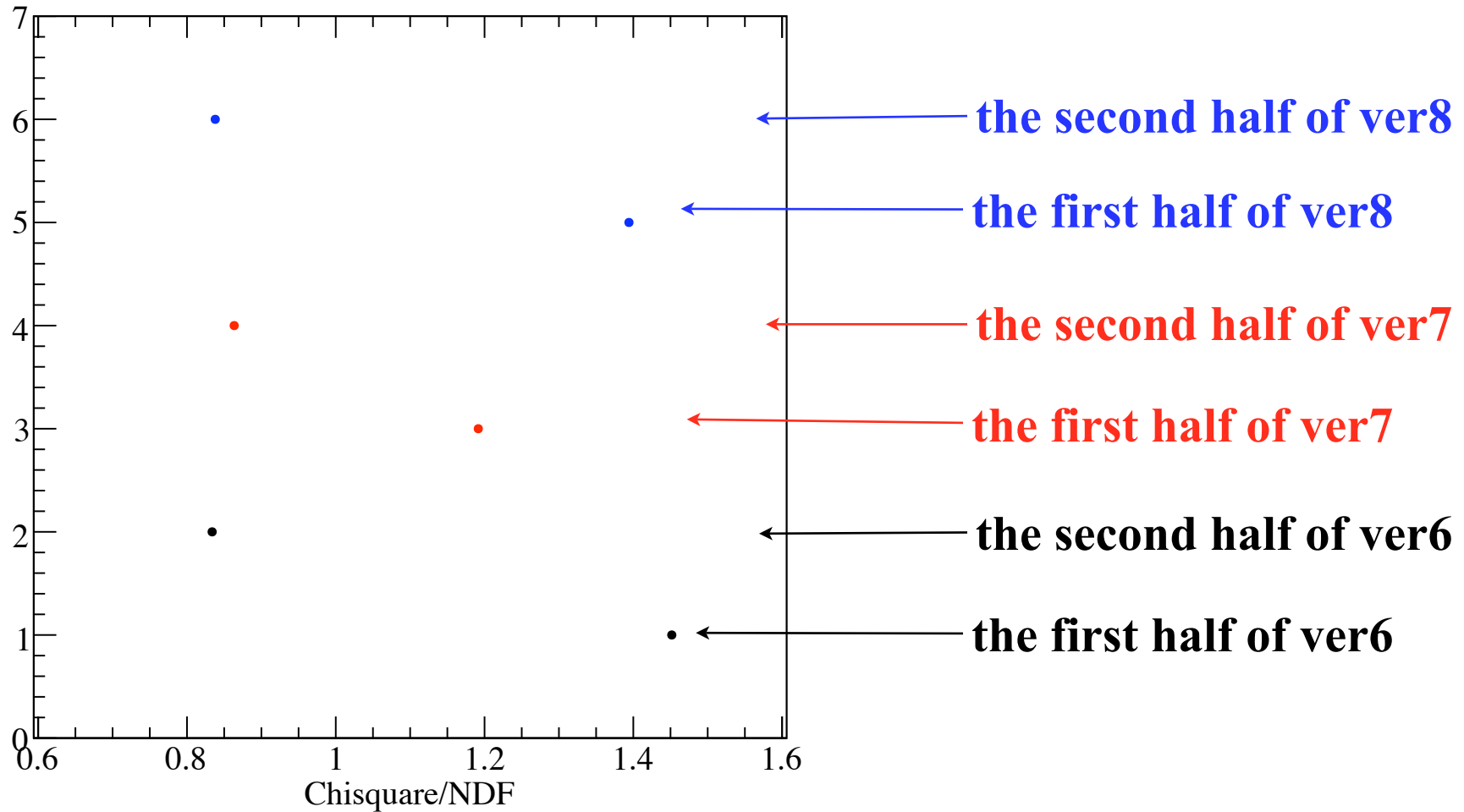
the second half of ver6

the first half of ver6

Gamma [eV]

the first half of cycle2 is different from that of cycle1
(the second half has good consistency).

χ^2/NDF cycle1 e549 trig.

Chisquare/NDF KHeXLa e549 trig cycle1

χ^2/NDF cycle2 e549 trig.
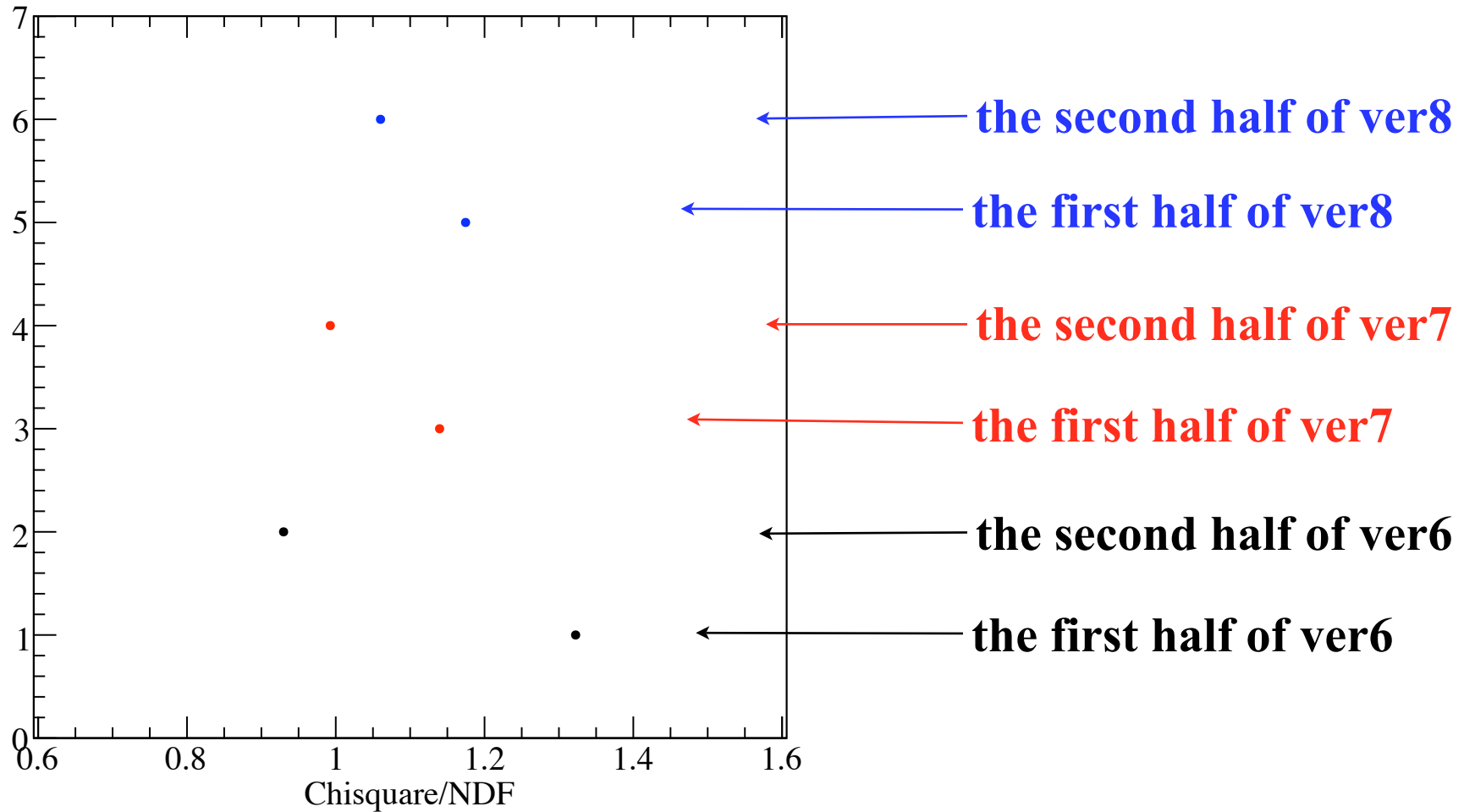
the chisquare / NDF of cycle2 is better than that of cycle1.

NEXT

Start FADC event selections

1. simple peak search

2. peak search by fitting (pol4)

3. criteria of event selections
   (pile-up, oscillation, etc...)