CIMA

SLO-US, 20.3.2020, time of COVID-19

Andrej Studen

Run 20200903/1

- Moved south down by 100 units
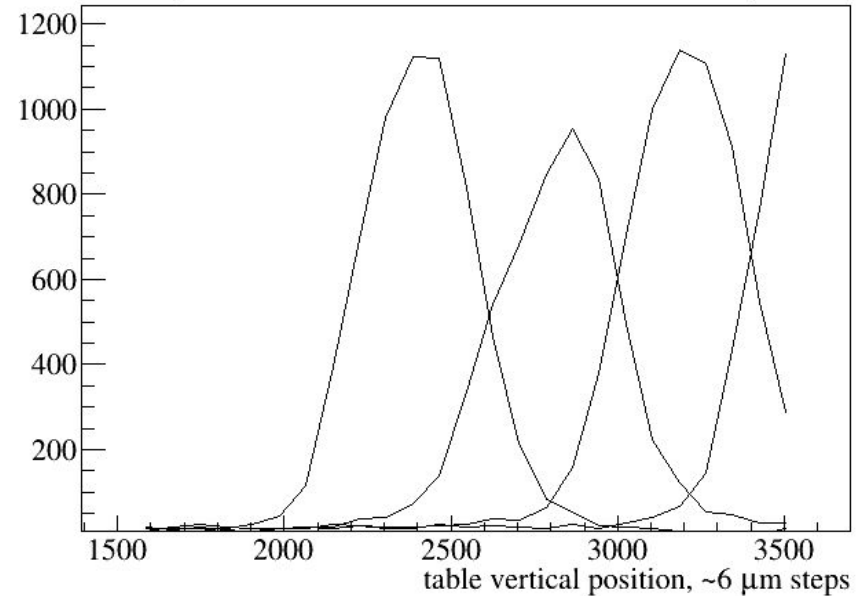- Opposite effect recorded (peaks move towards higher table position count)
  From email:

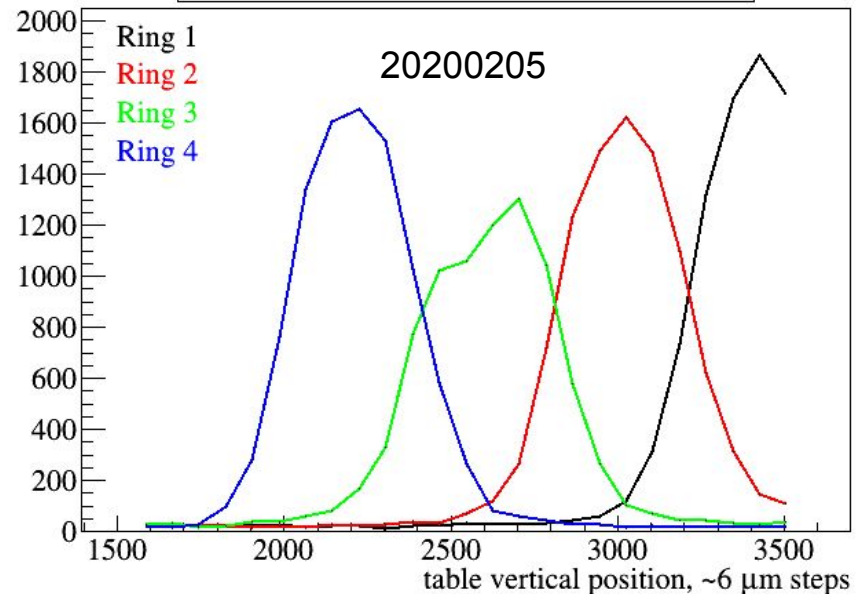Original (2020/2/5) Adjusted (2020/3/09):

	Original	Adjusted
south	2809.69	3039.066
north	2370.31	2360.934
BGO	2856.61	2846.55

- Clearly, not a good move.
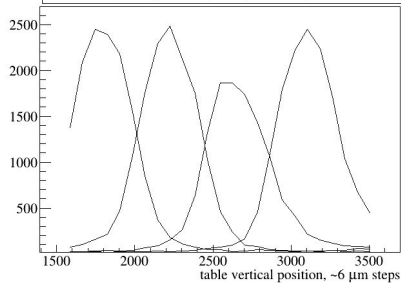- Asked HK to move up by 300 (in stepper units, shift of 230 recorded, 440 desired)

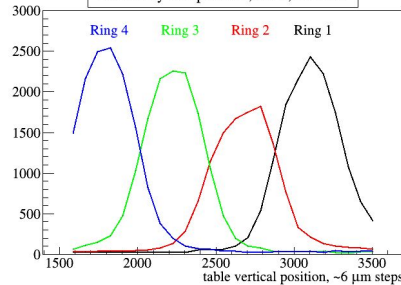Counts by bed position, 0xa0, si-south, 20200309/1

Counts by bed position, 0xa0, si-north, 20200309/1
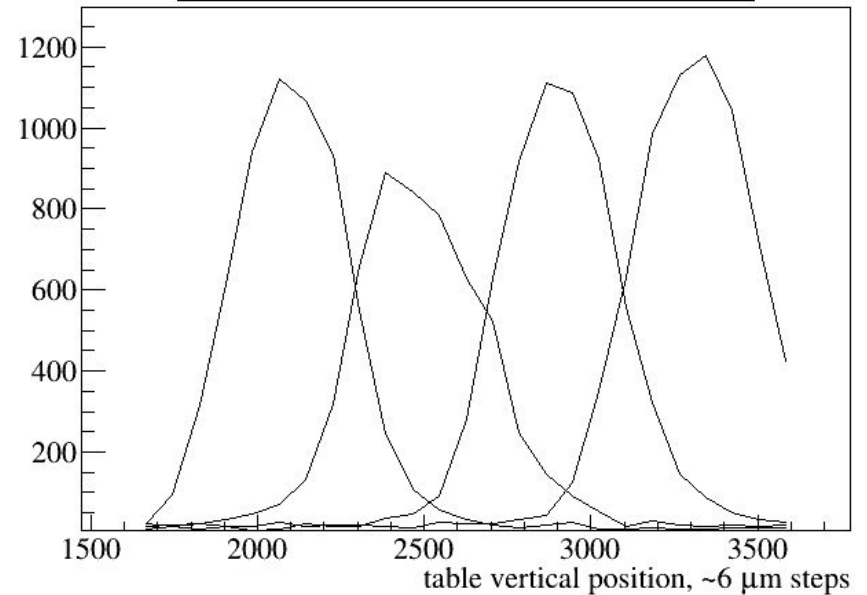

Counts by bed position, 0xa0, si-north

Counts by bed position, 0x50, si-south

Ring 1
Ring 2
Ring 3
Ring 4

20200205

Run 20201603/0

- Moved south up by 300 units

Original (2020/2/5) Adjusted (2020/3/16):
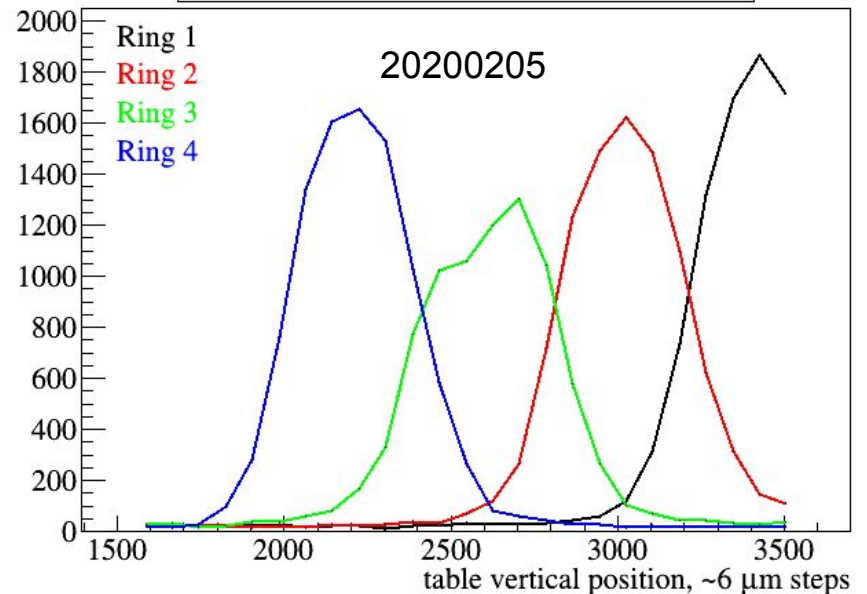
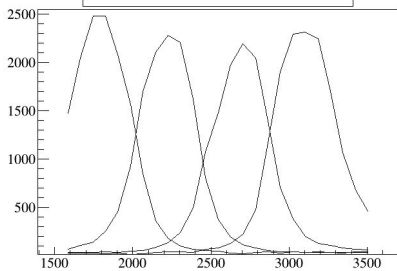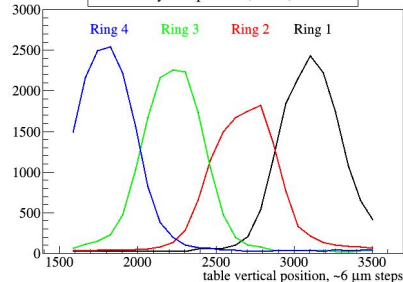|	Original	Adjusted
south	2809.69	2611.8
north	2370.31	2410.2
BGO	2856.61	3135.0

- Error on BGO!

Counts by bed position, 0x50, si-south, 20200316/0
table vertical position, ~6 μm steps

Counts by bed position, 0xa0, si-north, 20200316/0

Counts by bed position, 0xa0, si-north

Ring 4   Ring 3   Ring 2   Ring 1

Counts by bed position, 0x50, si-south

Ring 1
Ring 2
Ring 3
Ring 4

20200205

table vertical position, ~6 μm steps

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Vertical calibration
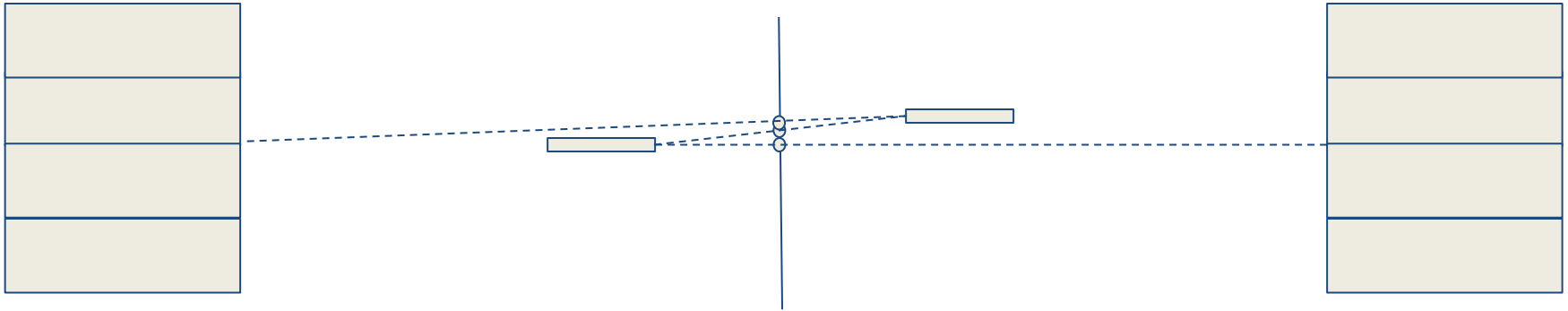
- Updated formulas
- Use measured center between si-detectors from si scan and gap between 2nd and 3rd ring
- Assuming XS measured for sibgo-south, XN for sibgo-north and XSi for si only, all in step coordinates
- Assume B to be BGO center, s to be center of south si and n to be center of north si, the following holds

$$X_S = s + (a/(1+a))(B-s)$$
$$X_N = n + (a/(1+a))(B-n)$$
$$X_{Si} = (n+s)/2$$

- where $a = d_{Si}/d_{BGO}$ is ratio of silicon vs. BGO detector distance, a equals one fifth..
- $s = X_{Si} + (1+a)(X_S - X_N)/2$
- $n = X_{Si} - (1+a)(X_S - X_N)/2$
- $B = ((1+a)/a)(X_N + X_S)/2 - (1/a)X_{Si}$