

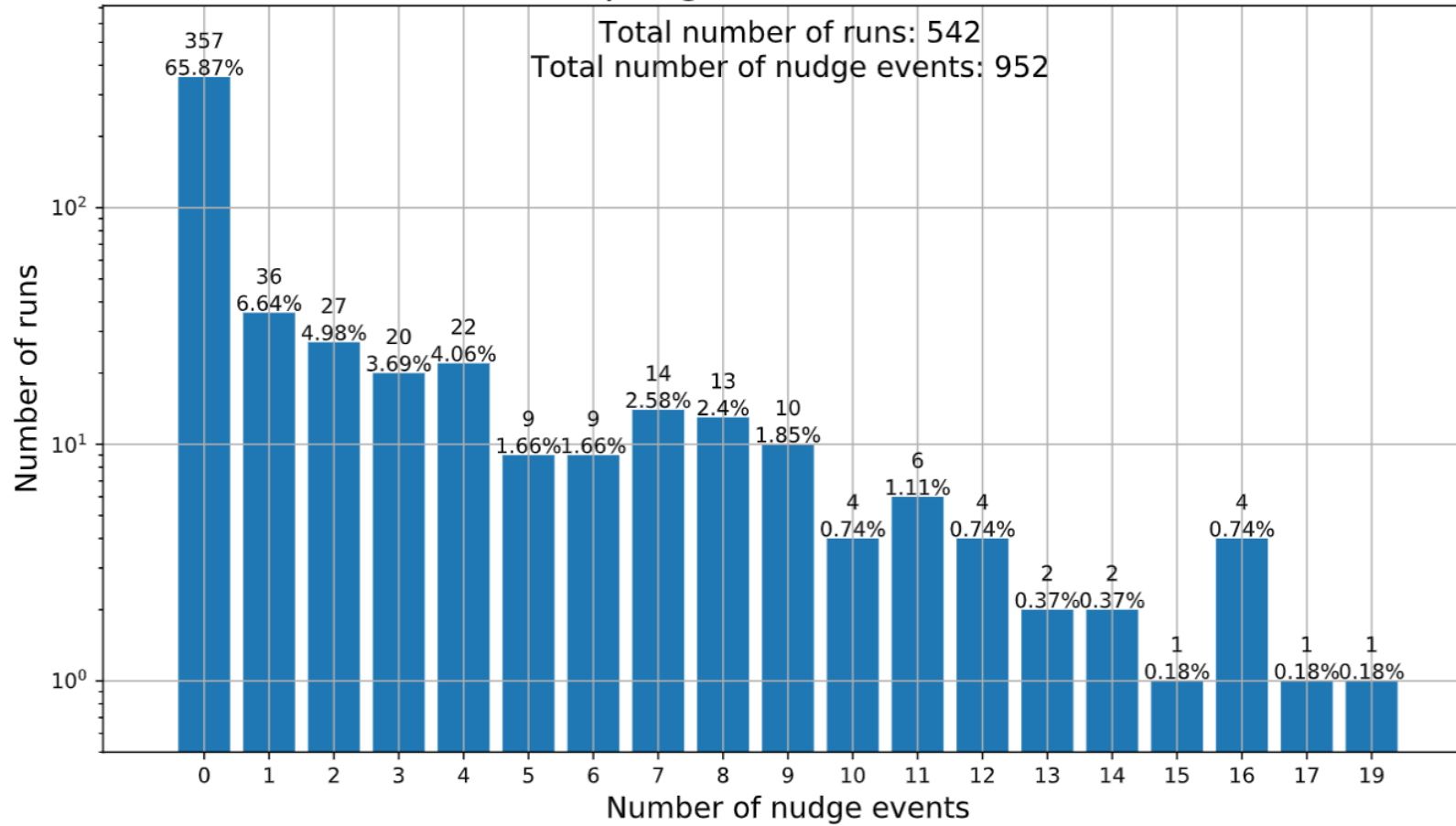
Update

Jiawei Guo

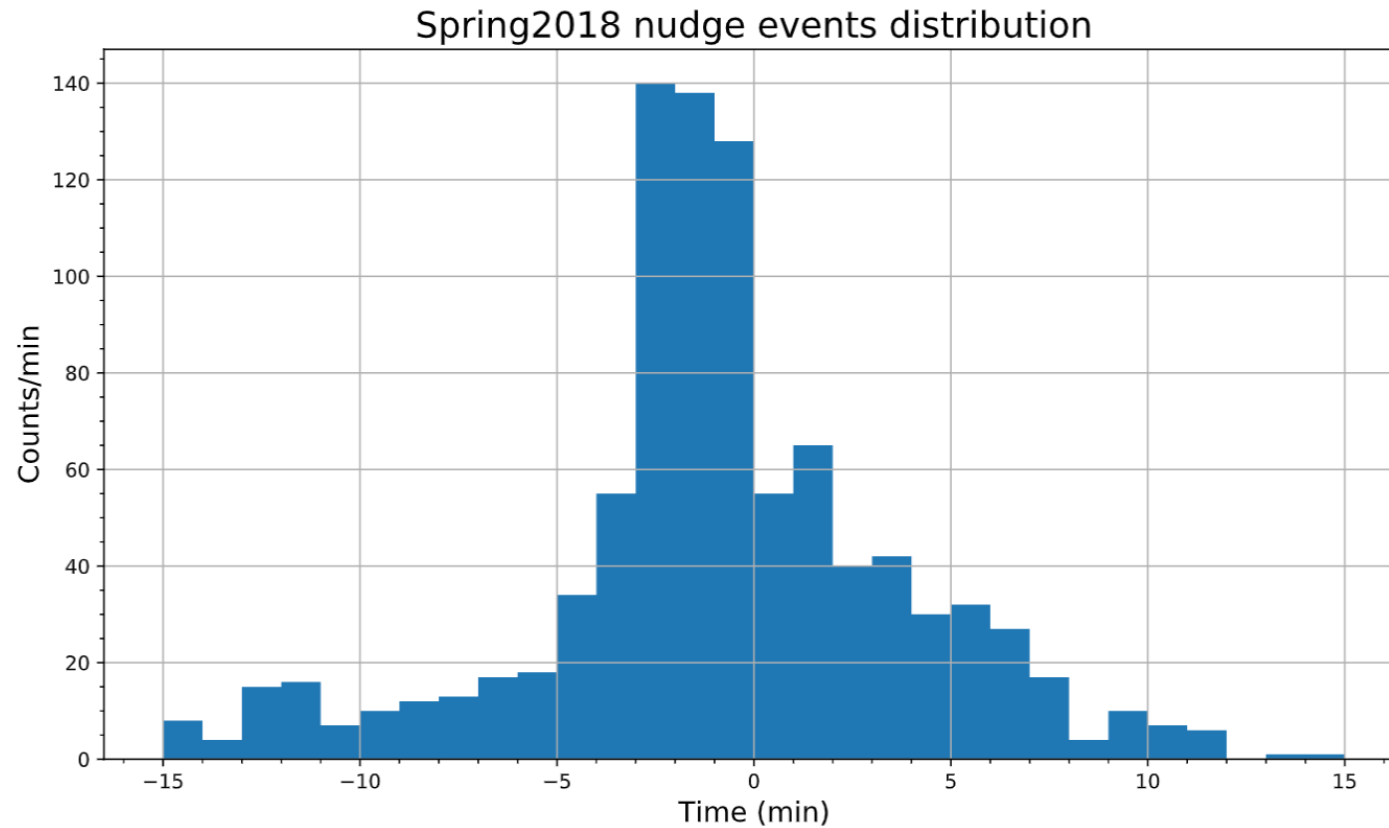
April 8, 2024

- 2 action items
 - Info about nudge events (how many, when they happen)
 - Beam spot position on diamond

Spring2018 runs stats

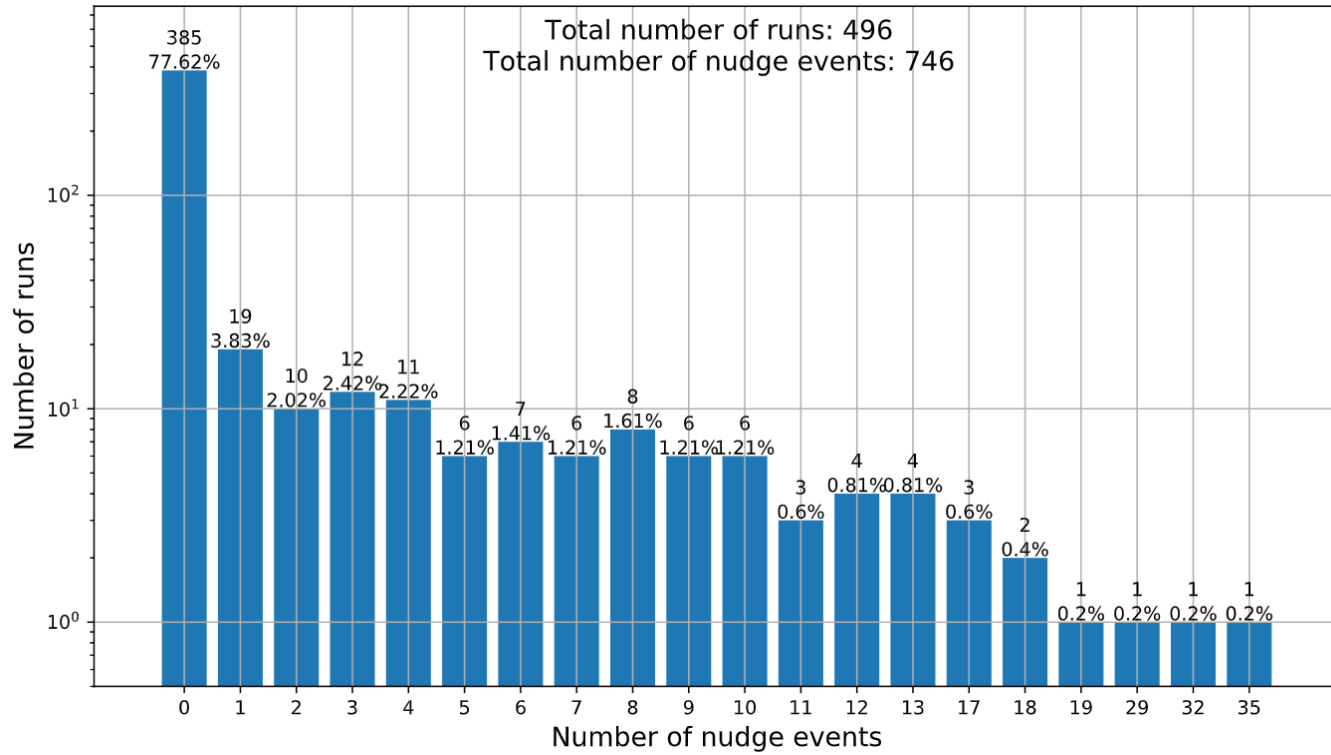


- The number of runs with N nudge events (log-y scale)
- Most runs without nudge events 65.87%
- Total 952 nudge events



- Nudge events distribution around run start time from RCDB
- Most happen between 0-5 mins before run starts

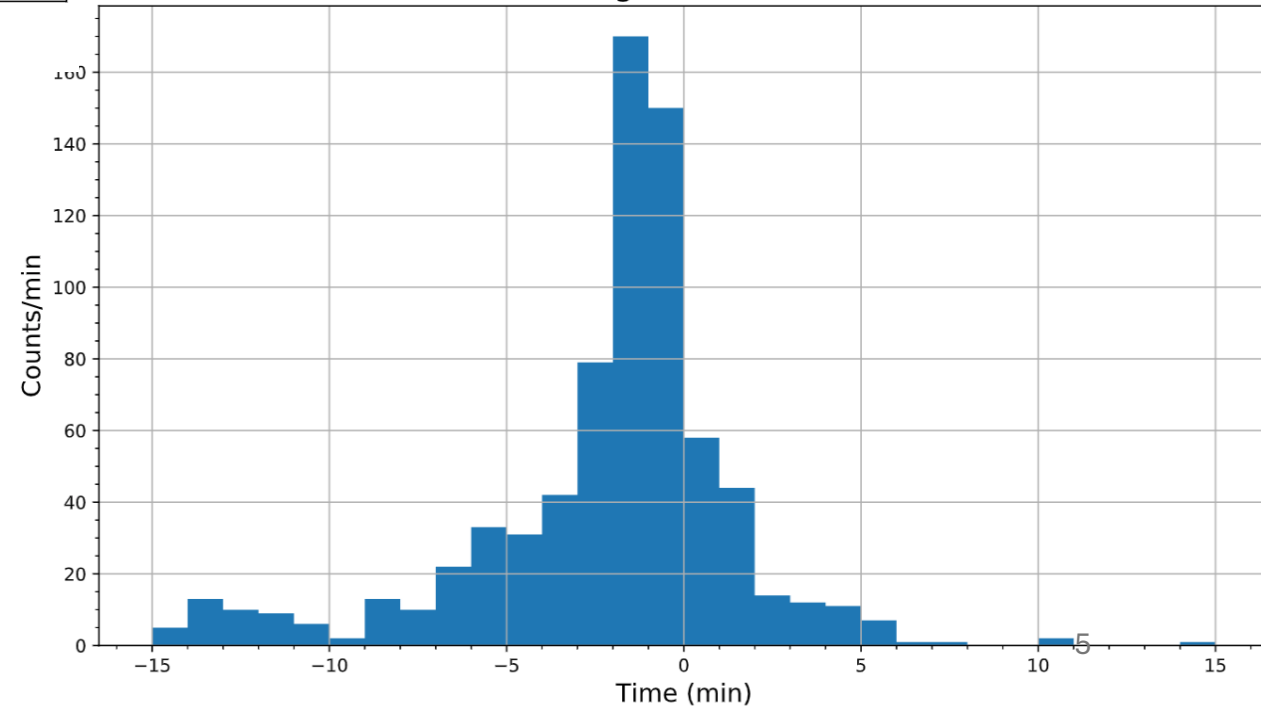
Fall2018 runs stats



- 77.62% runs without nudge
- A run with max 35 nudge events
- Total 746 nudge events

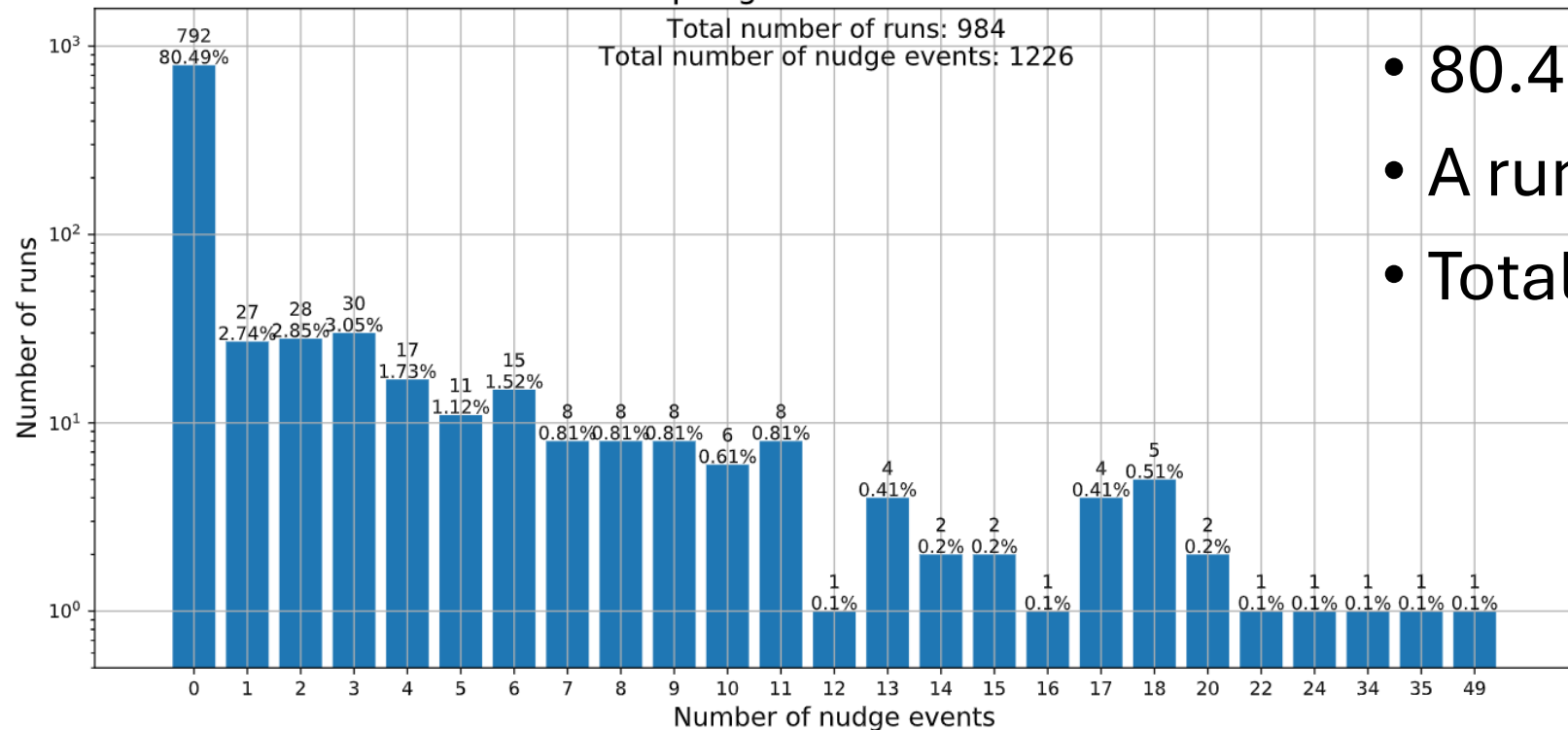
- Most happen between 0-5 mins before run starts

Fall2018 nudge events distribution



Spring2020 runs stats

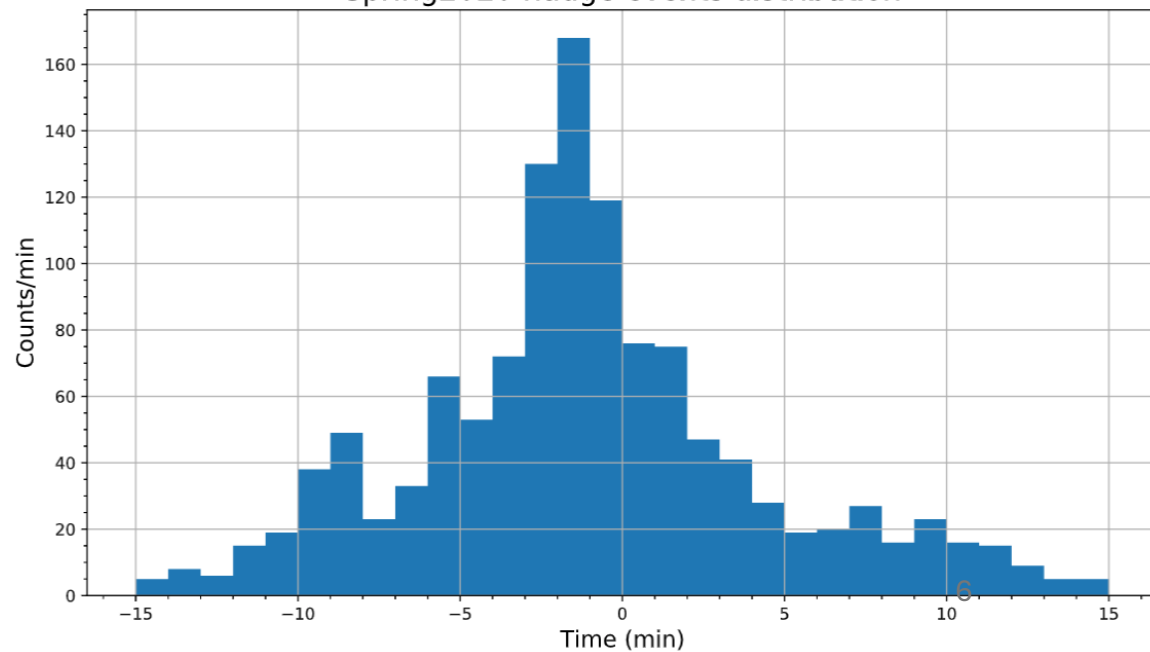
Total number of runs: 984
Total number of nudge events: 1226



- 80.49% runs without nudge
- A run with max 49 nudge events
- Total 1226 nudge events

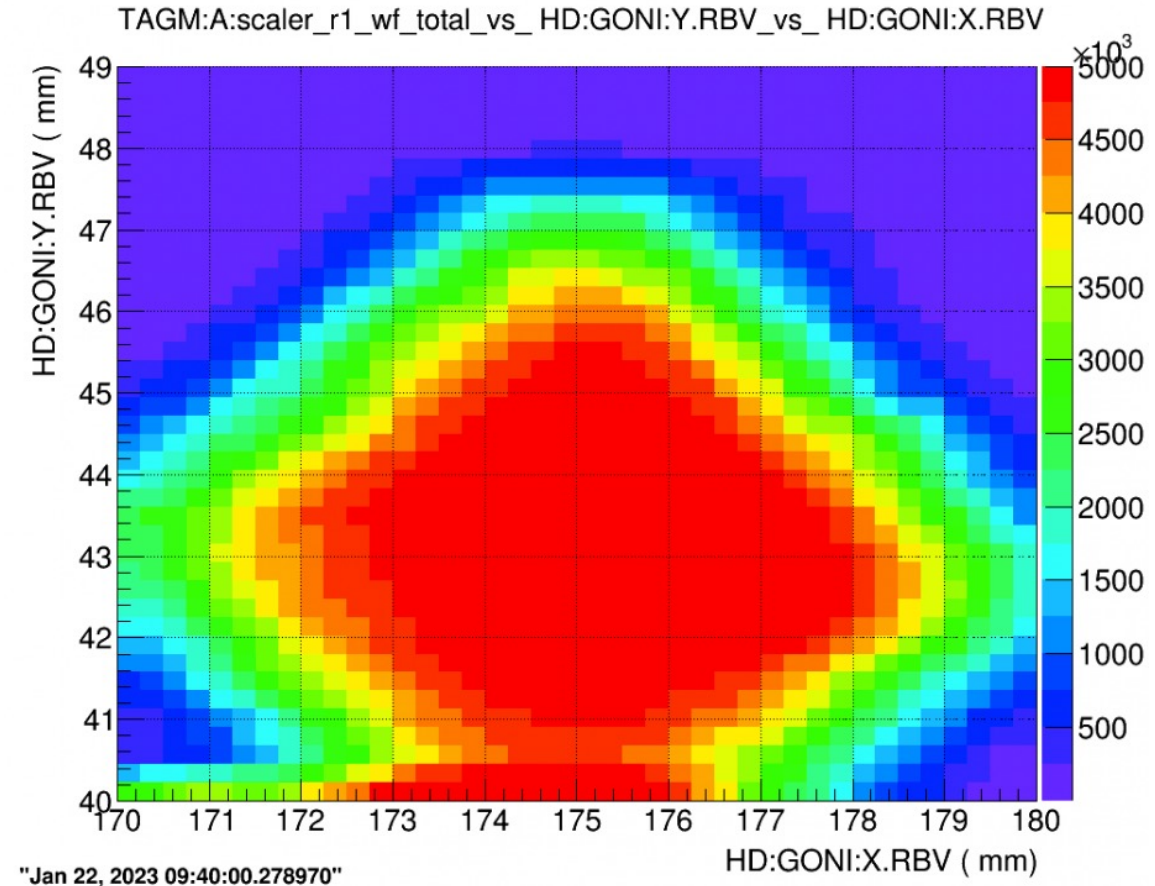
- Most happen between 0-5 mins before run starts

Spring2020 nudge events distribution

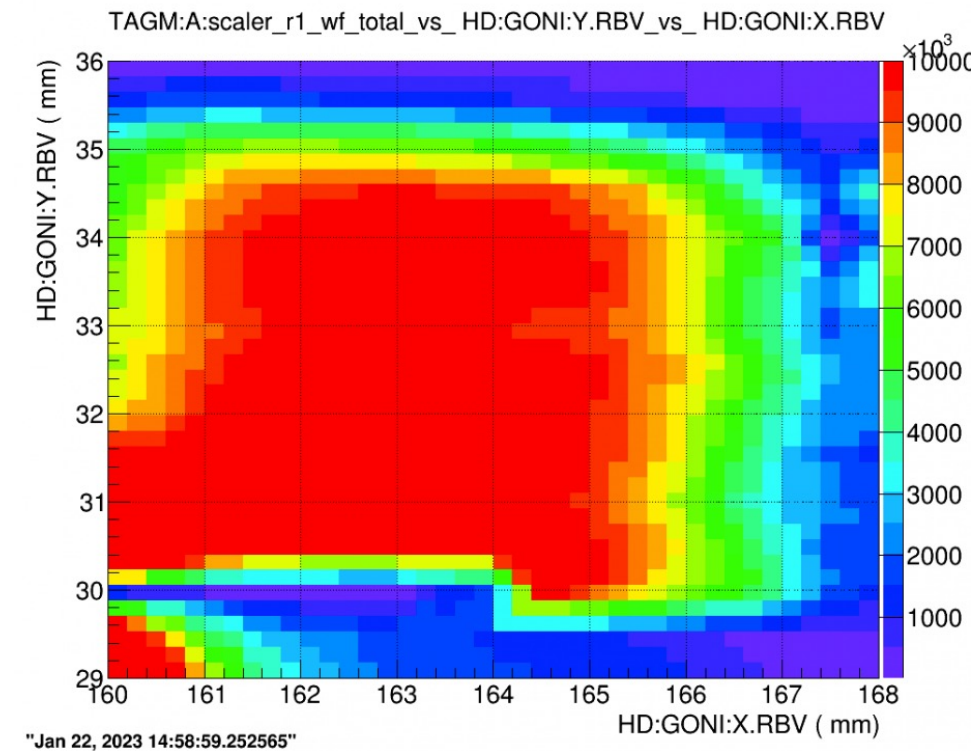


Beam spot position

- The beam spot position was picked manually
 - Beam fixed at 5C11b
 - Scan XY of goniometer
 - Pick a desired XY manually
- An example
 - Z-axis TAGM total scaler rates
 - (174.8, 44)mm was picked



- Different diamonds are mounted differently
 - Another example with a different GONI:ROLL angle
- Beam spot position can be represented by **(X, Y, Roll)** of the goniometer.
 - Under assumption 5C11B is at the nominal position
 - Usually beam position at 5C11B fluctuate with $\sigma < 0.2\text{mm}$
- Change beam spot position by changing goniometer X, Y



Backup

- Identify nudge events
- Nudging completes in
 - 2s window
 - Or 3s window

2s complete nudging



		Pitch set	Pitch rbv
2018-09-28	23:34:58	-3.66194	-3.66194
2018-09-28	23:34:59	-3.66194	-3.66194
2018-09-28	23:35:00	-3.66264	-3.66264
2018-09-28	23:35:01	-3.66264	-3.66264

3s complete nudging



2018-09-28	23:36:25	-3.66406	-3.66406
2018-09-28	23:36:26	-3.66406	-3.66406
2018-09-28	23:36:27	-3.67113	-3.66406
2018-09-28	23:36:28	-3.67113	-3.67113
2018-09-28	23:36:29	-3.67113	-3.67113