

HGTD plots to approve

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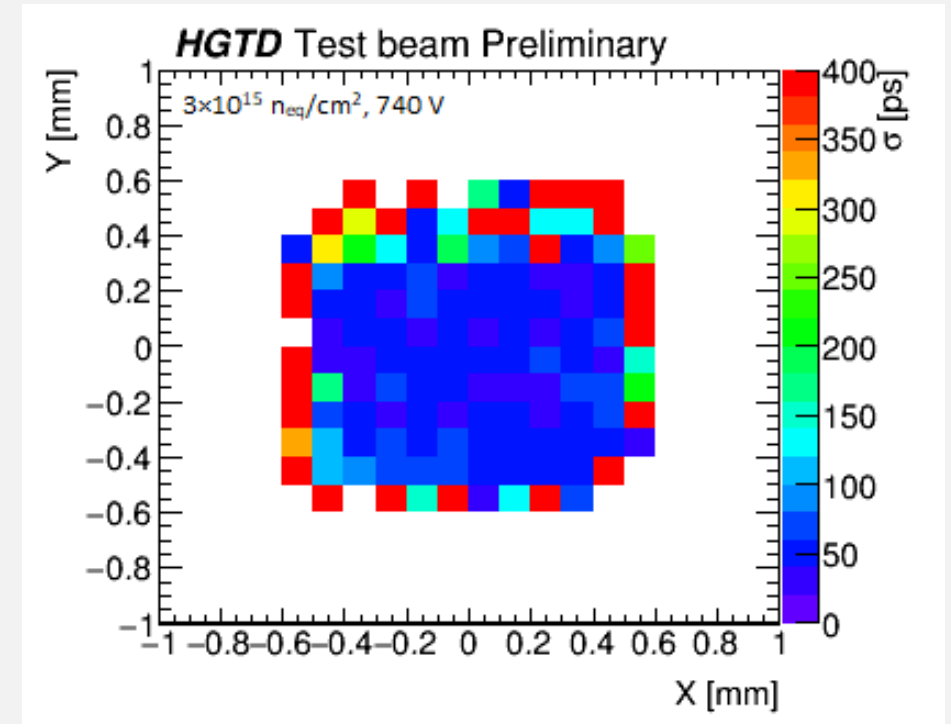
2D Timing map

- Time resolution as a function of the reconstructed position of particles for **CNMW6SI006 3×10^{15} n** at bias voltage **-740 V** (5 °C difference from start and end of batch / 60k events with FE-I4 info)

- Time difference distribution calculated as:

$$\Delta t = t_{DUT}(f_{CFD}=50\%) - t_{LGA35}(f_{CFD}=20\%)$$

- A 2 fC threshold is applied
- Bin size of $100 \times 100 \mu\text{m}^2$ to ensure sufficient statistics
- Time resolution degrades at the sensor edges which also suffer from low statistics
- LGA35 contribution (29.7 ps) is already subtracted



2D Timing map

- Time resolution as a function of the reconstructed position of particles for **CNMW6SI006** $3 \times 10^{15} \text{ n}$ at bias voltage **-740 V**
- Time resolution quite homogeneous at the central area ($\sim 55 \text{ ps}$)
- LGA35 contribution (29.7 ps) is already subtracted
- Pad region
 - $0.7 \times 0.7 \text{ mm}^2$ (gain layer implantation)
- Edge region
 - $0.15 \times 0.15 \text{ mm}^2$

