

Plots wanted from carryvreckan

- Charge sharing
- Position resolution
- Detection efficiency

■ Control plots

- Distribution of charge collected on each pixel (identified by position wrt seed) in the cluster

■ Main plots to show externally (meetings, conf, ...)

- Charge collected on seed and on cluster
- Evolution of cumulated charge in cluster (or ratio with cluster charge) with the nb of pixels included in the cluster
- 2D map (3x3 and 5x5) of average ratio pixel charge/cluster charge
- Distribution of cluster size for various pixel-charge thresholds (values to be decided)

- Scatter plots for all clusters matched to a track and modulo a 2x2 pixel submatrix, the X-Y position is given by the track extrapolation, the Z information is:
 - MPV of seed charge
 - MPV of cluster charge
 - Ratio of MPV for seed / MPV for cluster
 - Average nb of pixel in cluster for a given charge-threshold
 - Residual standard deviation
 - Detection efficiency

■ Control plot

- 2D map of associated clusters with tracks
- Track-related distribution: χ^2 , nb of hits used, slopes (X in Y)
- Residual in both directions using the seed pixel position as cluster position (check digital resolution)

■ Main plots to show externally (meetings, conf, ...)

- Residual in both directions with center of gravity
- Residual in both directions with eta-correction algorithm (to be implemented probably)
- Residual in both directions while faking binary-pixel (i.e. pixels charge is 1 if pixel charge above a given threshold)

■ Control plots

- 2D map of unmatched track positions at the DUT
- 2D map of matched track positions at the DUT
- Distribution of distance between the matched hit and the track (2D or in X and Y)
 - Also distance from the nearest hit (when there) for tracks unmatched
- All control plots for resolution studies are also useful here
- Noise distribution of all pixels and separately for seed pixels

■ Main plots to show externally (meetings, conf, ...)

- No plots here, just numbers
- Study efficiency for various pixel-charge threshold
- Fake rate number from faking binary-pixel (i.e. pixels charge is 1 if pixel charge above a given threshold)
- Distribution of efficiency and fake-rate with threshold when faking binary-pixel