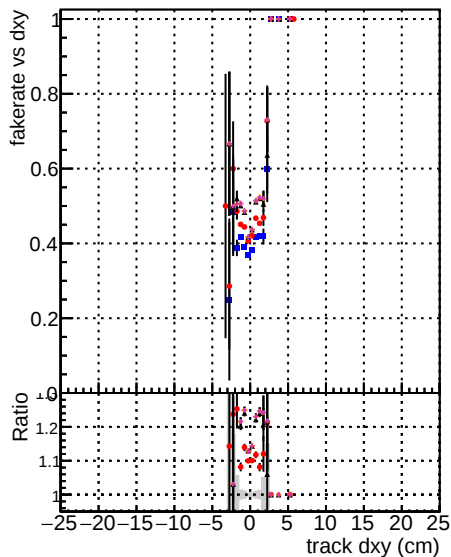
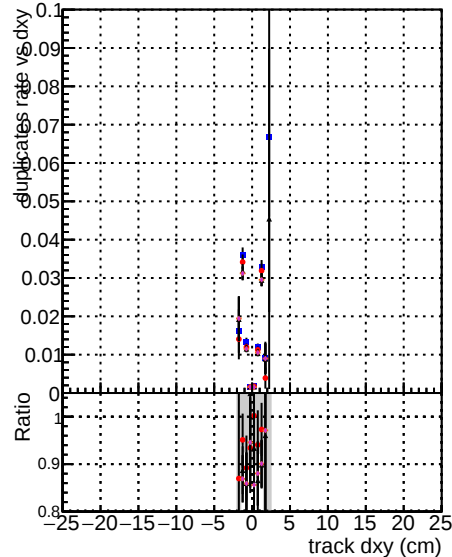


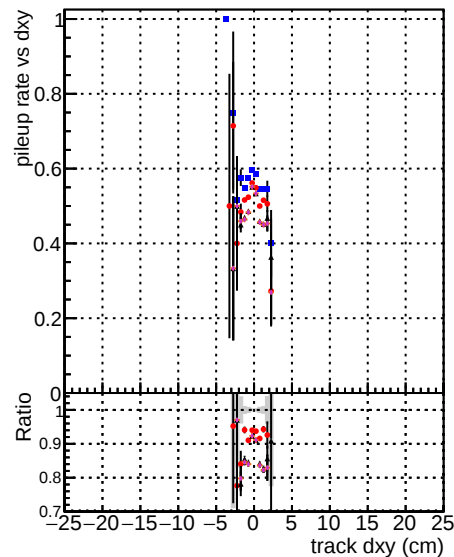
Fake rate vs dxy



Duplicates Rate vs Dxy



Pileup rate vs dxy



Fake rate vs d

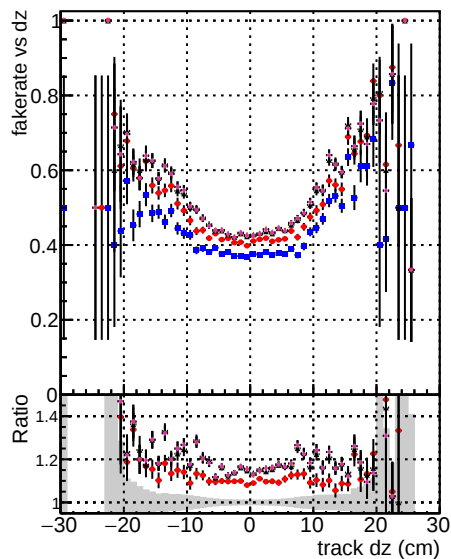


Figure 1 consists of two panels. The top panel shows the pileup rate vs dz (cm) from -30 to 30. The y-axis ranges from 0 to 1.0. Data points are shown for different track dz ranges: $dz < -20$ (black circles), $-20 < dz < -10$ (red circles), $-10 < dz < 0$ (blue circles), $0 < dz < 10$ (magenta circles), $10 < dz < 20$ (green circles), and $dz > 20$ (black circles). A shaded region indicates the pileup rate. The bottom panel shows the ratio of pileup rates for different track dz ranges. The y-axis ranges from 0.7 to 1.0. The x-axis is the same as the top panel. The ratio is shown for the same track dz ranges as the top panel. A shaded region indicates the ratio.