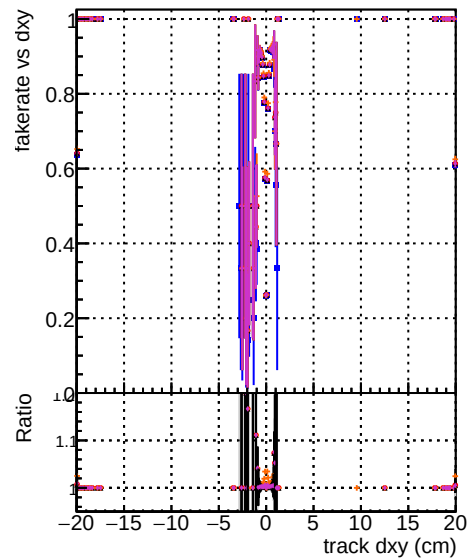
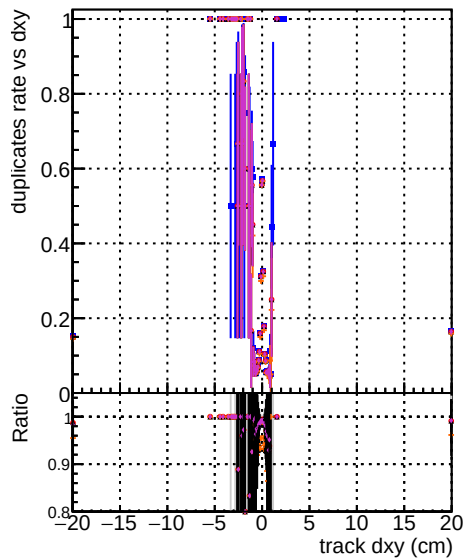


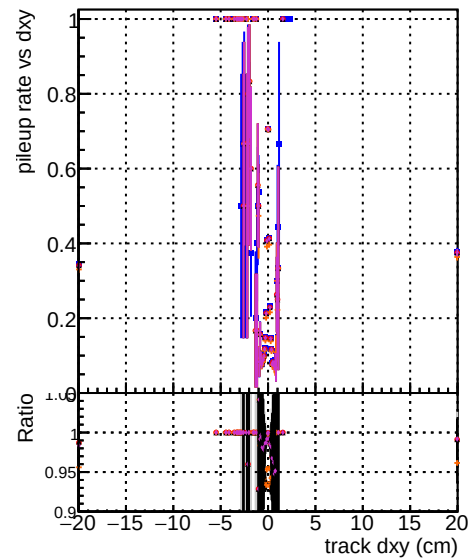
Fake rate vs dxy



Duplicates Rate vs Dxy



Pileup rate vs dxy



Fake rate vs d

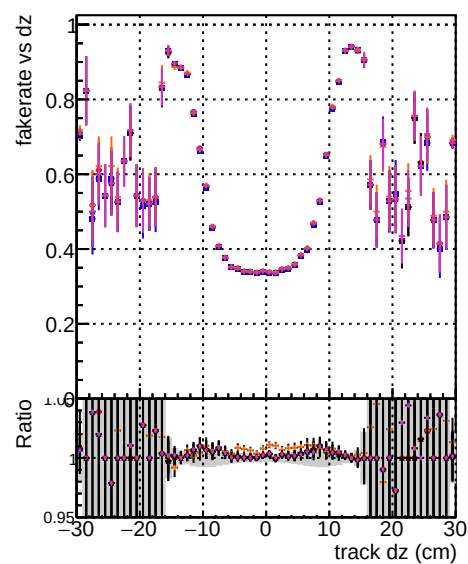


Figure 1 consists of two panels. The top panel is a scatter plot with error bars showing the 'duplicates rate vs dz' for various track types. The x-axis is 'track dz (cm)' ranging from -30 to 30. The y-axis is 'duplicates rate vs dz' ranging from 0 to 0.8. The data points are color-coded: blue for 'Electron', red for 'Photon', green for 'Neutrino', and purple for 'Other'. A black curve is fitted to the data, showing a peak around dz = 0. The bottom panel is a plot of the 'Ratio' of duplicate rates for different track types. The x-axis is 'track dz (cm)' ranging from -30 to 30. The y-axis is 'Ratio' ranging from 0.95 to 1.0. The plot shows a shaded region representing the uncertainty, with a central peak around dz = 0.

Figure 10 consists of two panels. The top panel is a scatter plot with error bars showing the pileup rate versus track dz (cm). The x-axis ranges from -30 to 30 cm, and the y-axis ranges from 0 to 0.8. Data points are shown for different track types (e.g., $dz_{\text{track}}^{\text{min}}$, $dz_{\text{track}}^{\text{max}}$, $dz_{\text{track}}^{\text{mid}}$) and are fitted with a Gaussian curve. The bottom panel is a scatter plot with error bars showing the ratio of pileup rates versus track dz (cm). The x-axis ranges from -30 to 30 cm, and the y-axis ranges from 0.95 to 1.05. Data points are shown for different track types and are fitted with a Gaussian curve.