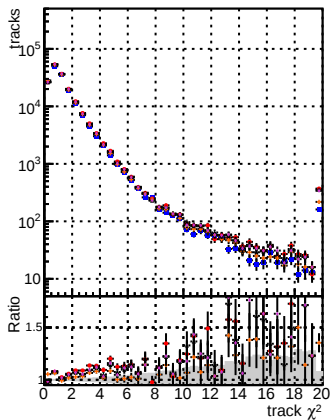
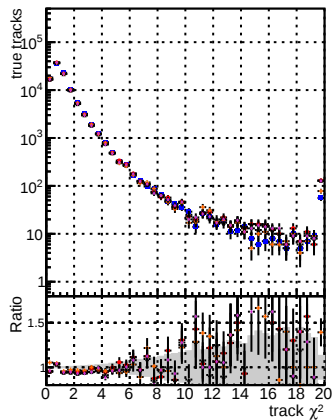


N of reco track vs normalized  $\chi^2$

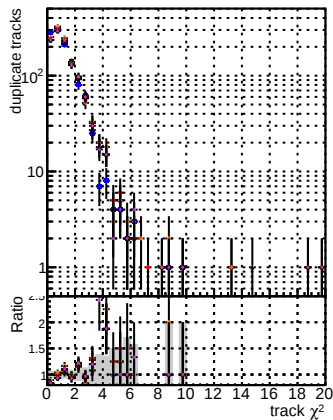


N of associated (recoToSim) tracks vs normalized  $\chi^2$



The figure consists of two vertically stacked panels sharing a common x-axis labeled 'track  $\chi^2$ ' ranging from 0 to 20. The top panel shows 'fake tracks' on a logarithmic y-axis from 1 to 10,000. It contains four data series: red stars, blue circles, orange squares, and black crosses, all connected by lines. All series show a decreasing trend as  $\chi^2$  increases. The bottom panel shows 'Ratio' on a linear y-axis from 0 to 2.0. It contains the same four data series with error bars. The ratios are generally below 1.5, with some fluctuations and larger error bars at higher  $\chi^2$  values.

N of associated (recoToSim) looper tracks vs normalized  $\chi^2$



N of reco track vs. s

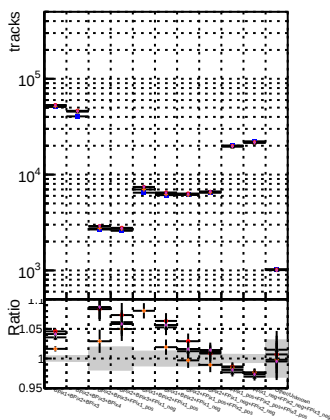


Figure 1 consists of two panels. The top panel shows the number of fake tracks on a logarithmic scale (y-axis, ranging from  $10^2$  to  $10^4$ ) against various track parameters (x-axis). The bottom panel shows the ratio of fake tracks to real tracks on a logarithmic scale (y-axis, ranging from 1.0 to 1.4) against the same parameters. Both panels include a grid and data points with error bars.