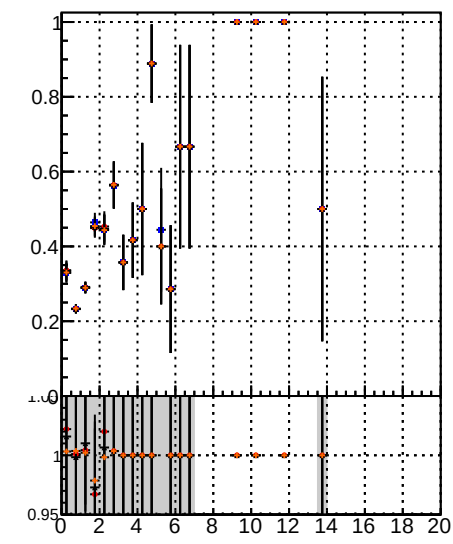
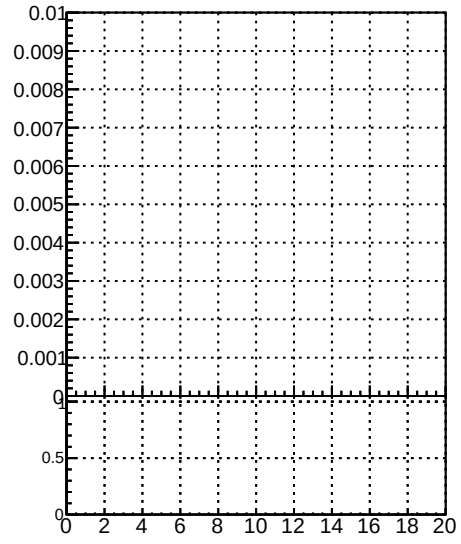


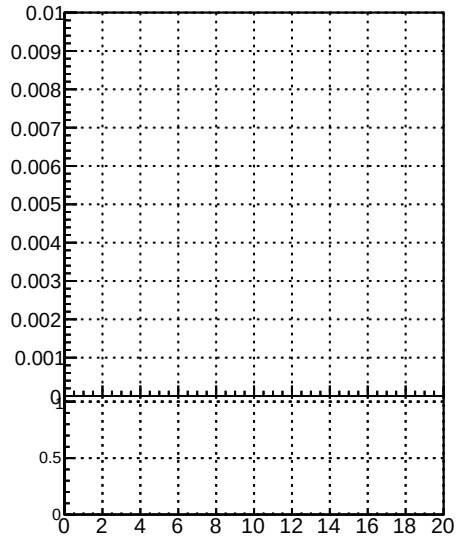
Fake rate vs normalized χ^2



Duplicates Rate vs normalized χ^2



Pileup rate vs normalized χ^2



Fake rate vs. χ^2 for BSM, MS, and data. The plot shows the fake rate as a function of normalized χ^2 for BSM (blue), MS (orange), and data (red) across a range of normalized χ^2 values from 0 to 20. The bottom panel shows a histogram of the normalized χ^2 distribution, with a shaded region indicating the range of the data points.

