

All figures here represent run 5772 from tpass2.6, which were cooked on Sunday Sep. 6.

In Fig.1 shown " $X_{cl} - X_{tr}$ VS X_{cl} " distributions for uncorrected clusters. Left column is for negatives

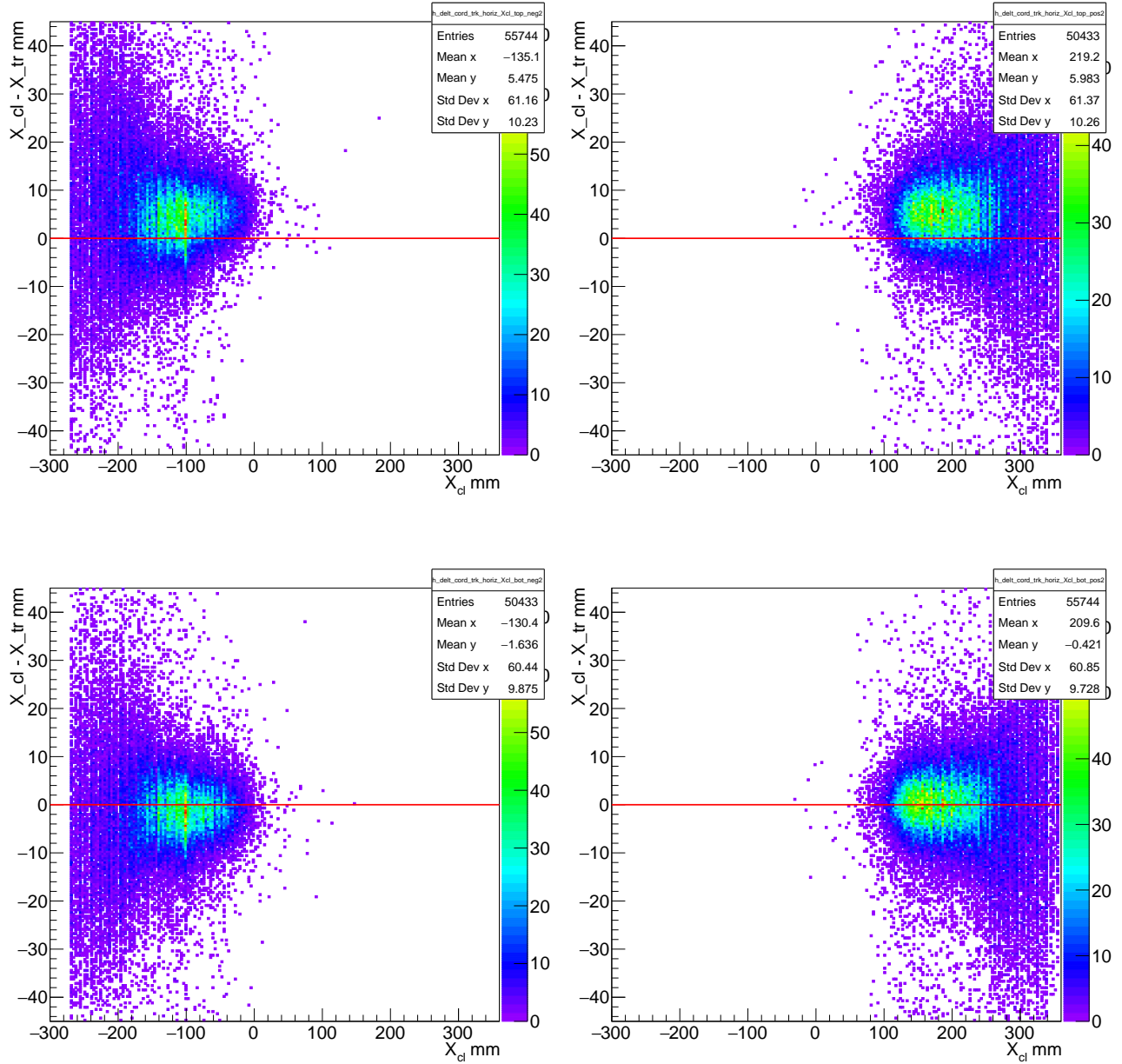


Figure 1: " $X_{cl} - X_{tr}$ VS X_{cl} " distributions for uncorrected clusters. Left column is for negatives and right column is for positives. Bottom row represents tracks/clusters at bottom and top row represents tracks/clusters at top.

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Same distributions, but for corrected clusters is shown in Fig.2. Here also left column is for negatives and right column is for positives. Bottom row represents tracks/clusters at bottom and top row represents tracks/clusters at top.

These distributions then slice-fitted. Mean values of fits as a function of cluster X coordinate are

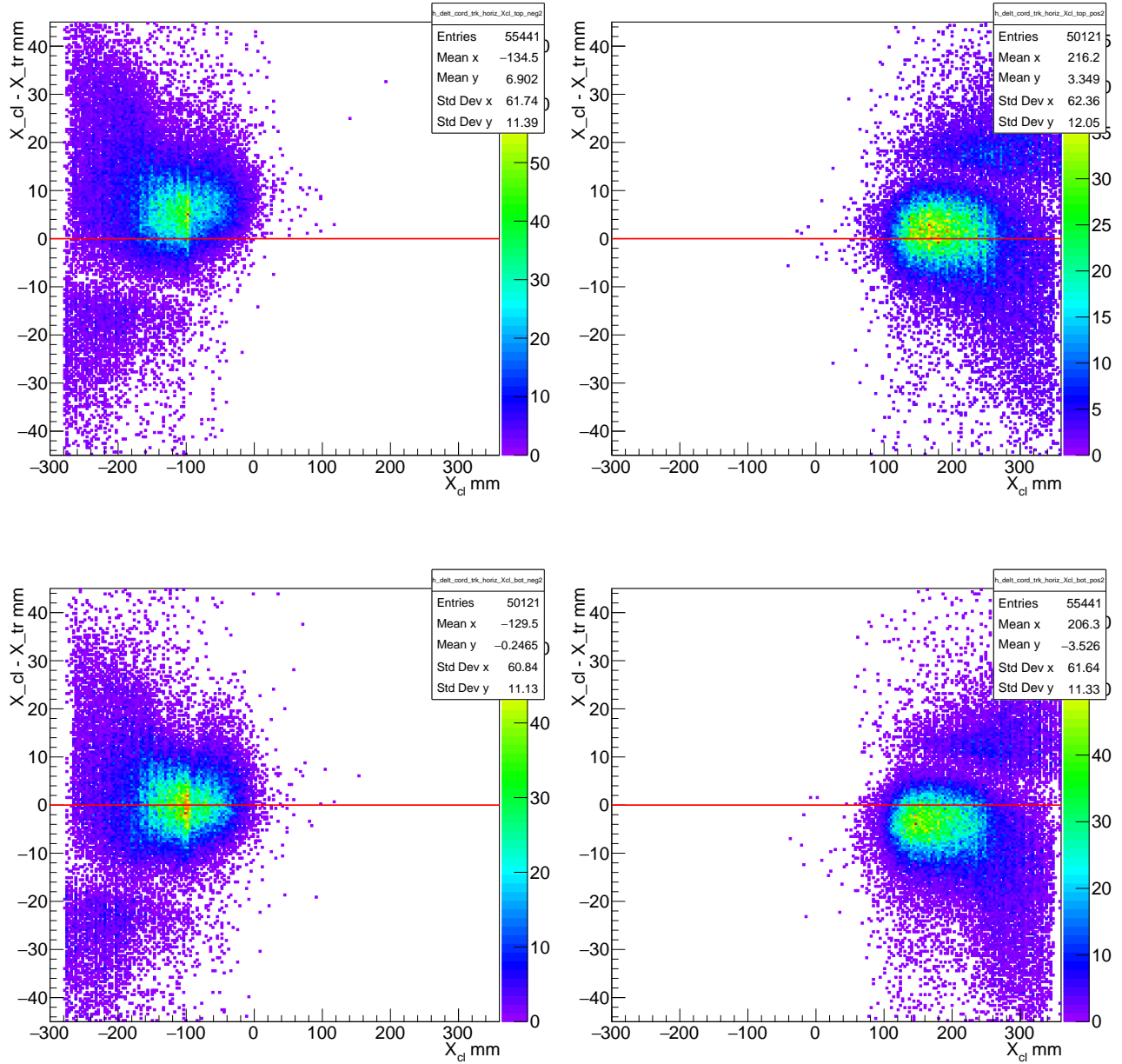


Figure 2: " $X_{cl} - X_{tr}$ VS X_{cl} " distributions for Corrected clusters. Left Column is for negatives and right column is for positives. Bottom row represents tracks/clusters at bottom and top row represents tracks/clusters at top.

shown in Fig.3, where red circles represent uncorrected clusters, while blue triangles represent corrected clusters. Left (Right) column represent negative (positive) tracks. Bottom (Top) row represents tracks at bottom (top) module of HPS.

Corresponding σ values are shown in Fig.4, where red circles represent uncorrected clusters, while blue triangles represent corrected clusters. Left (Right) column represent negative (positive) tracks. Bottom (Top) row represents tracks at bottom (top) module of HPS.

In the figures one can note that blue points don't expand all the region on X . This is because the gap in the corrected cluster matching changes the distribution shape, and they are not Gaussian anymore,

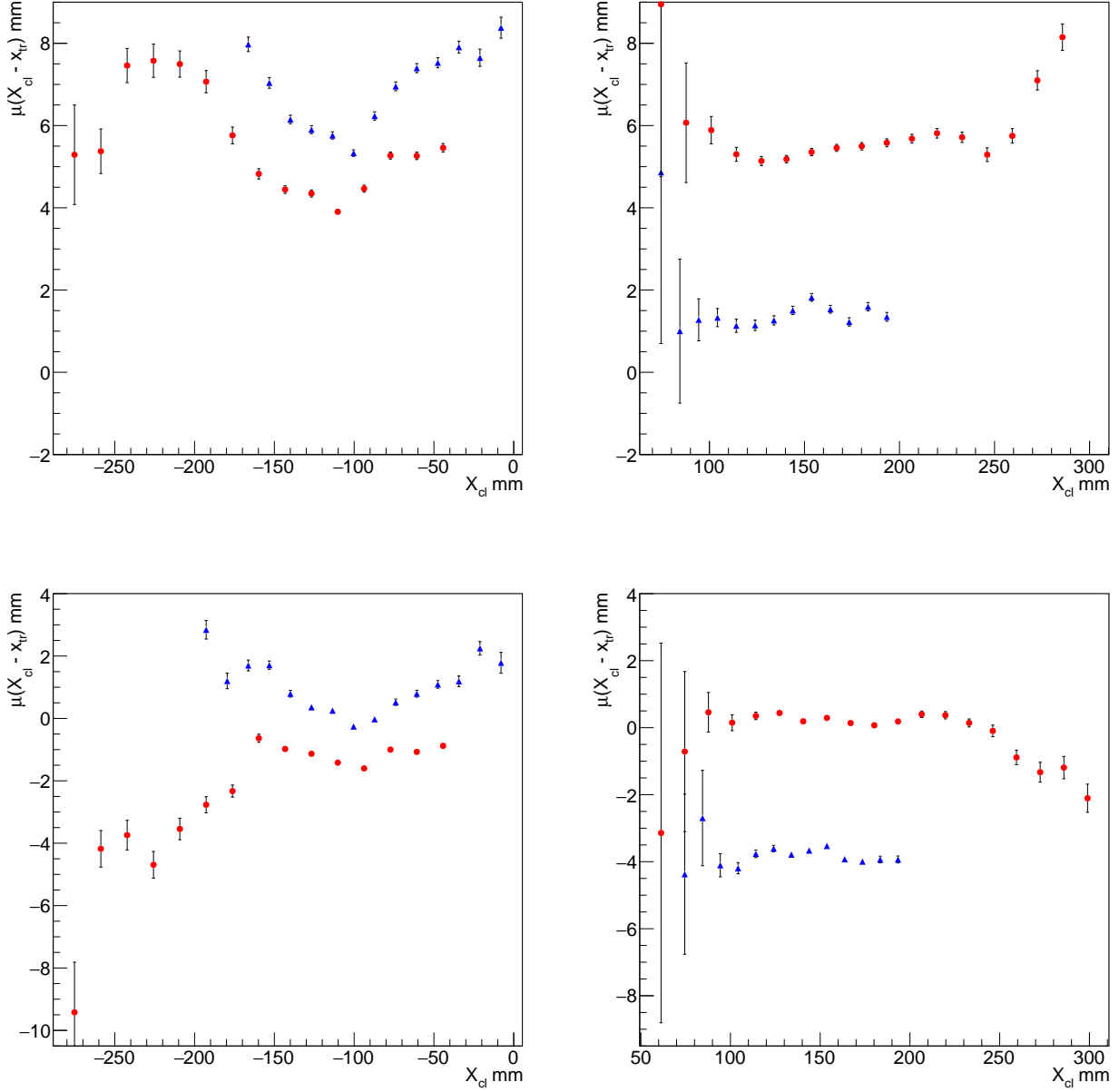


Figure 3: Mean values of slice fits as a function of cluster X coordinate. Red circles represent uncorrected clusters, while blue triangles represent corrected clusters. Left (Right) column represent negative (positive) tracks. Bottom (Top) row represents tracks at bottom (top) module of HPS.

therefore only regions where side tail effect is small, are fitted. Figures represented above indicate that in general for uncorrected and corrected cluster cases there is a shift w.r.t. 0 more than 5 mm , except for the corrected positives, where shift is around 2 mm . For the bottom module the uncorrected cluster matching is within ± 1 mm in the $X_{cl} \in (-170 : 250)$ mm range, while it is not the case for corrected cluster matching. The fact that for uncorrected ones it deviates at the edges might be because in the track extrapolation 1D mid-plane field was used, which should be stronger than the real value close to the left and right edges of the ECal, therefore the extrapolation bended the track more than actually it was bended.

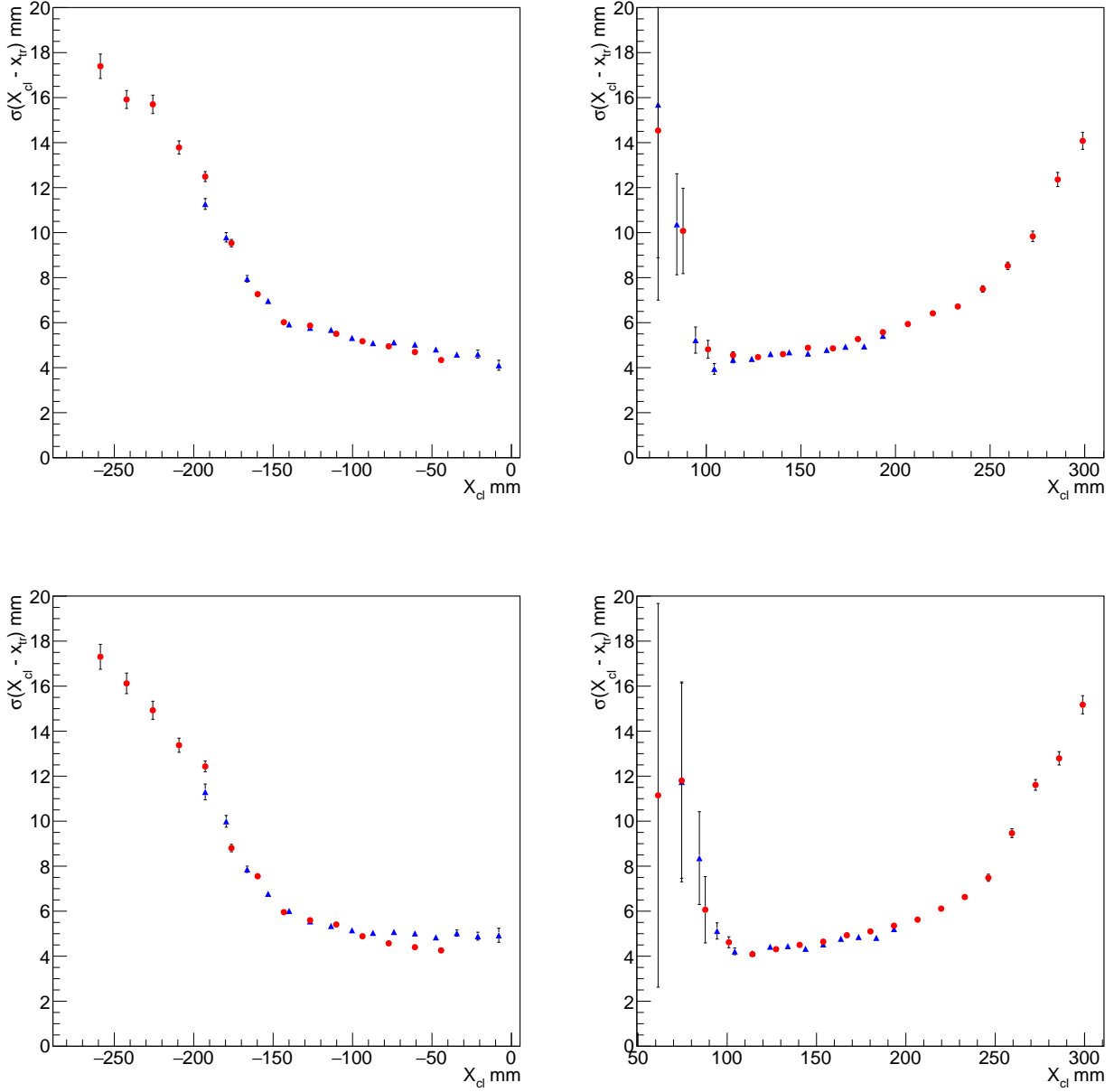


Figure 4: σ values of slice fits as a function of cluster X coordinate. Red circles represent uncorrected clusters, while blue triangles represent corrected clusters. Left (Right) column represent negative (positive) tracks. Bottom (Top) row represents tracks at bottom (top) module of HPS.

Also corrected cluster matchings for negatives and positives are not consistent with each other, while for uncorrected ones they seem consistent.

About σ values. They look similar for uncorrected and corrected cluster matchings, also for bottom and top. It is about $4 - 5 \text{ mm}$ in the central part of ECal (that also correspond to higher momenta), and it is about 18 mm at the edges where particle momenta is small and multiple scattering might change track trajectory considerably.