New Run 2 & Run 3 graphs (minimum selections on samples)

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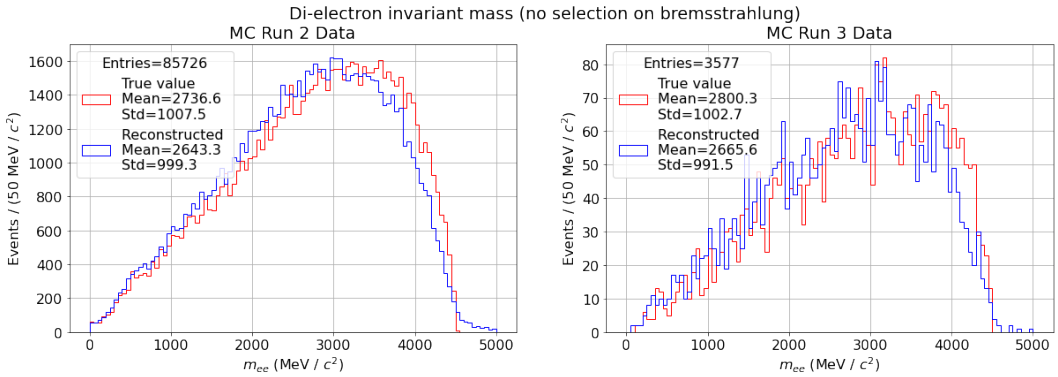

Figure 1: Invariant mass of e^+e^- pairs without any selection on bremsstrahlung (all data considered). Calculated with $m_{ee} = \sqrt{E^2 - |\mathbf{p}|^2}$ with $\mathbf{p} = (p_x, p_y, p_z)$.

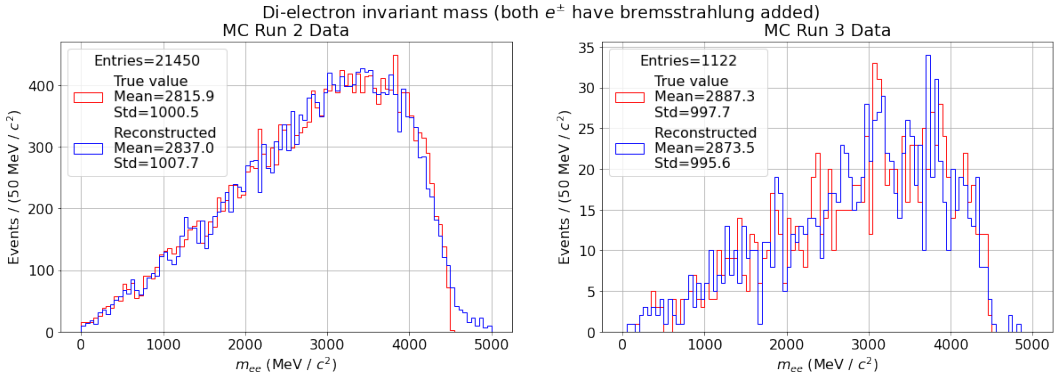

Figure 2: Invariant mass of e^+e^- pairs for which both $e^\pm$ have bremsstrahlung losses added to their momenta. Calculated with $m_{ee} = \sqrt{E^2 - |\mathbf{p}|^2}$ with $\mathbf{p} = (p_x, p_y, p_z)$.

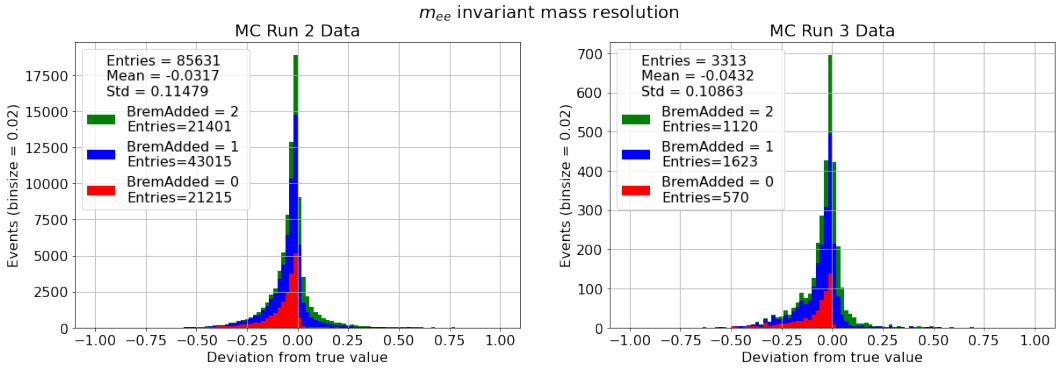

Figure 3: Resolution of the invariant mass of e^+e^- pairs and their distribution over different bremsstrahlung categories. BremAdded $= n$ indicates bremsstrahlung has been added to n electrons in the e^+e^- pair. The resolution is defined as $r(m_{ee}) = \frac{m_{ee}^{\text{rec}} - m_{ee}^{\text{true}}}{m_{ee}^{\text{true}}}$.

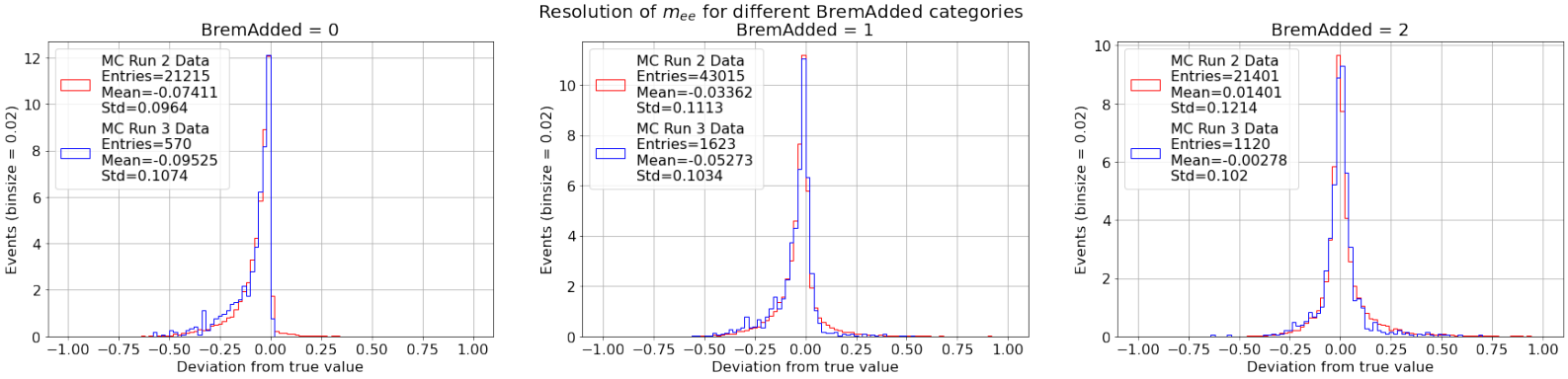

Figure 4: Resolution of the invariant mass of e^+e^- pairs and their distribution over different bremsstrahlung categories. BremAdded $= n$ indicates bremsstrahlung has been added to n electrons in the e^+e^- pair. The resolution is defined as $r(m_{ee}) = \frac{m_{ee}^{\text{rec}} - m_{ee}^{\text{true}}}{m_{ee}^{\text{true}}}$. These graphs provide a better comparison between Run 2 and Run 3 as opposed to Fig. 3. The distributions are normalised to compensate for the varying sample sizes.

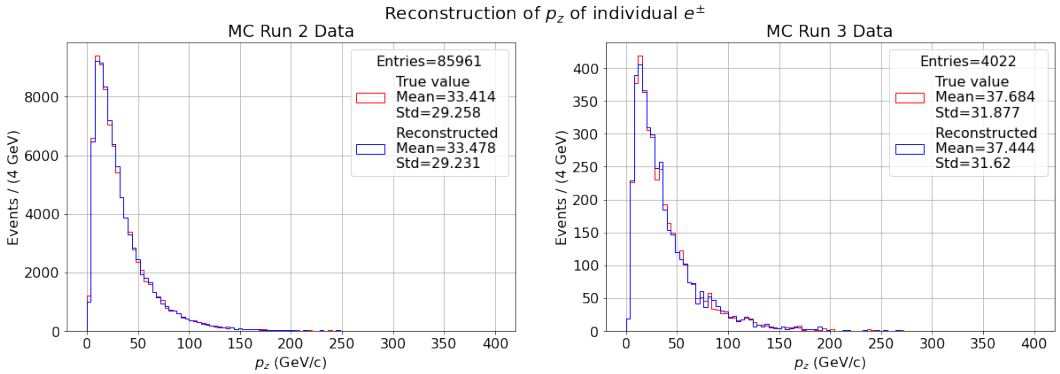

Figure 5: Distribution of the z-momenta of individual electrons in the samples analysed.

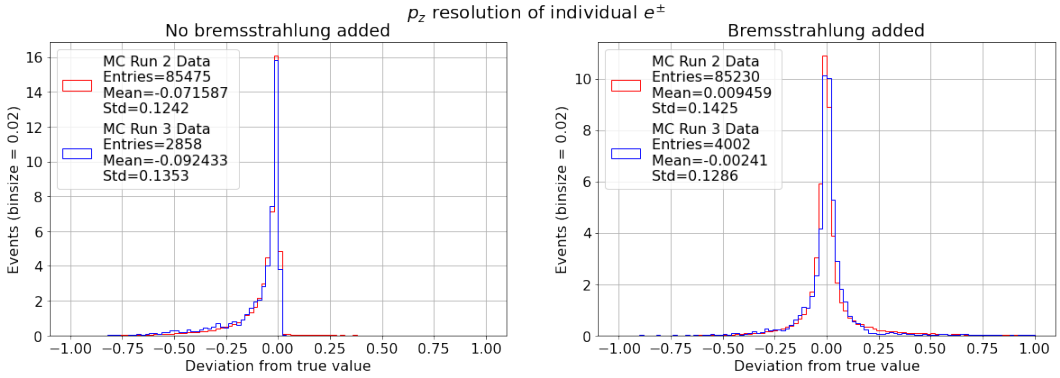

Figure 6: Resolution of the z-momenta of individual electrons in the samples analysed. The resolution is defined as $r(p_z) = \frac{p_z^{\mathrm{rec}} - p_z^{\mathrm{true}}}{p_z^{\mathrm{true}}}$. The distributions are normalised to compensate for varying sample sizes.

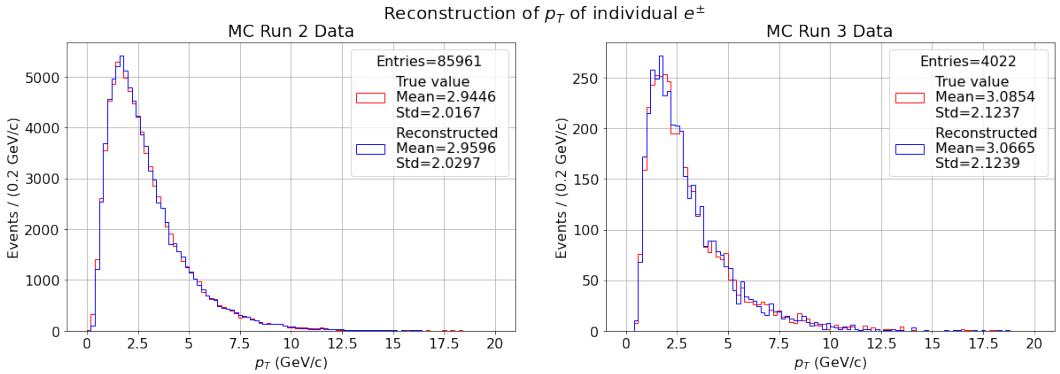

Figure 7: Distribution of the transverse momenta of individual electrons in the samples analysed.

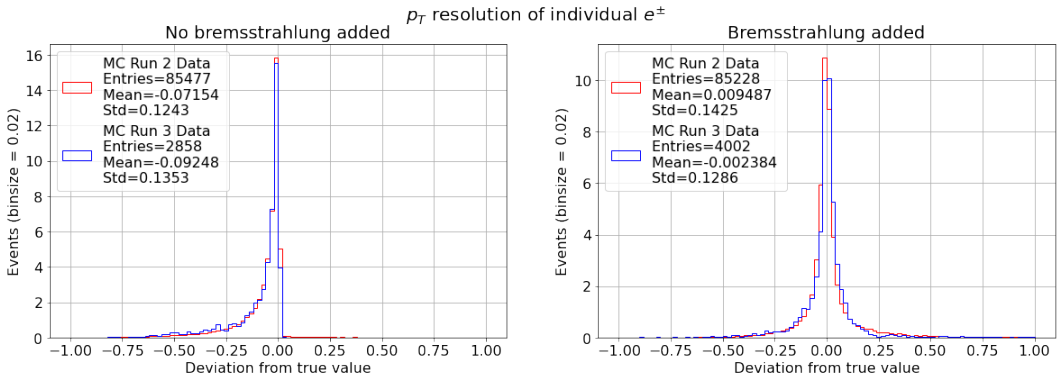

Figure 8: Resolution of the transverse momenta of individual electrons in the samples analysed. The resolution is defined as $r(p_T) = \frac{p_T^{\text{rec}} - p_T^{\text{true}}}{p_T^{\text{true}}}$. The distributions are normalised to compensate for varying sample sizes.

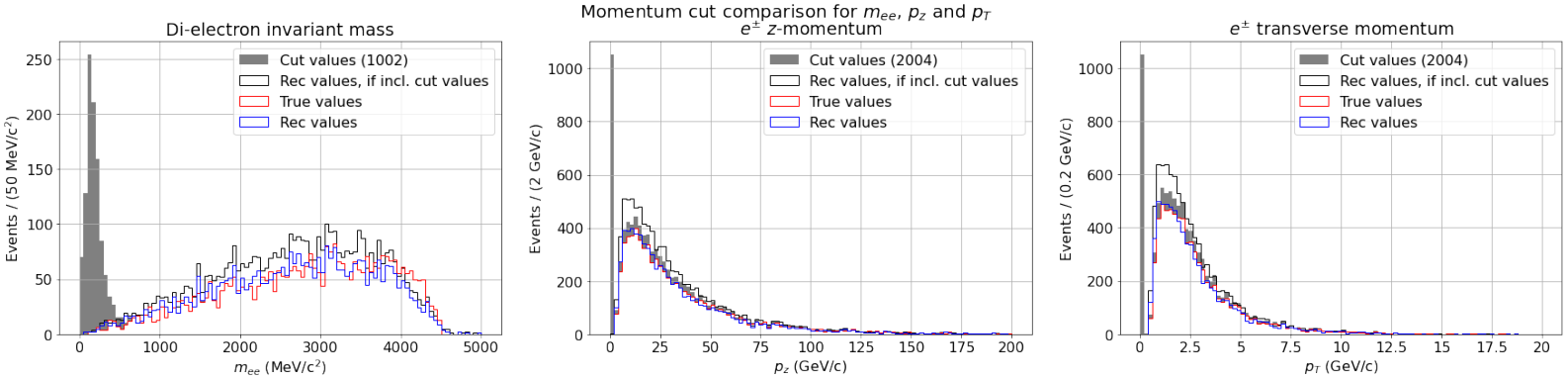

Figure 9: A cut on the z-momenta was performed on the samples analysed, because the Run 3 data showed an interesting feature. It had 2004 electrons with $p_z^{\text{true}} < 1$ GeV/c. The p_z^{rec} values however do not match these values and are more realistic (as shown by `Rec values, if incl. cut values`). These are cut out from the general analysis. It could hint at a possible fault in the code that generated the Run 3 sample. This fault would be in the mismatching of true and rec values.