

Belle II FEI study

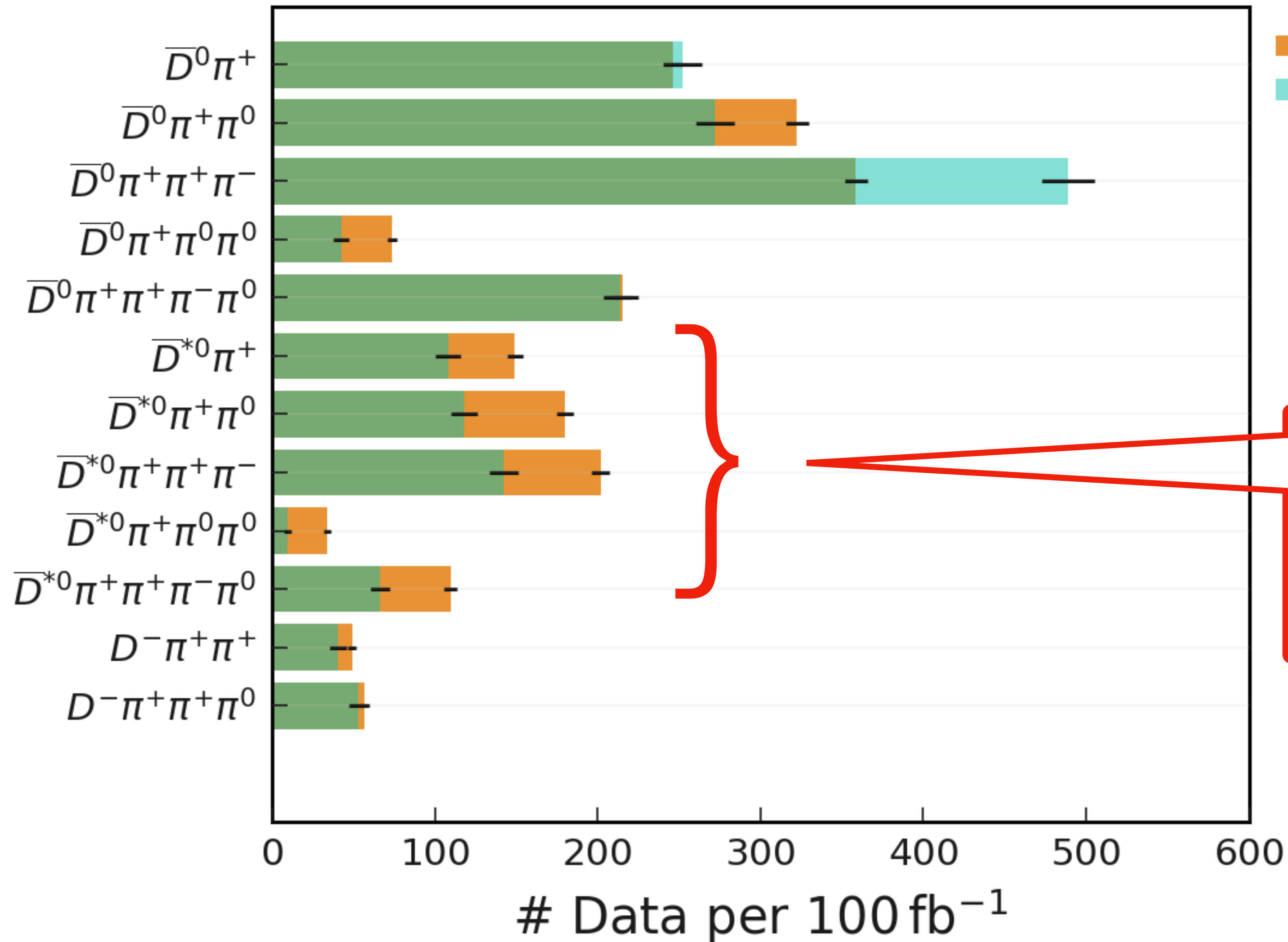
MC15ri: 400 fb⁻¹

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Comparison with Belle

Counting in 3σ window around D^0 in recoil side



- Decay model is not the only source of calibration factor; FEI reconstruction efficiency also affects

- Belle II seems to have lower efficiency to reconstruct D^{*0} ? [or just the π^0 ?]

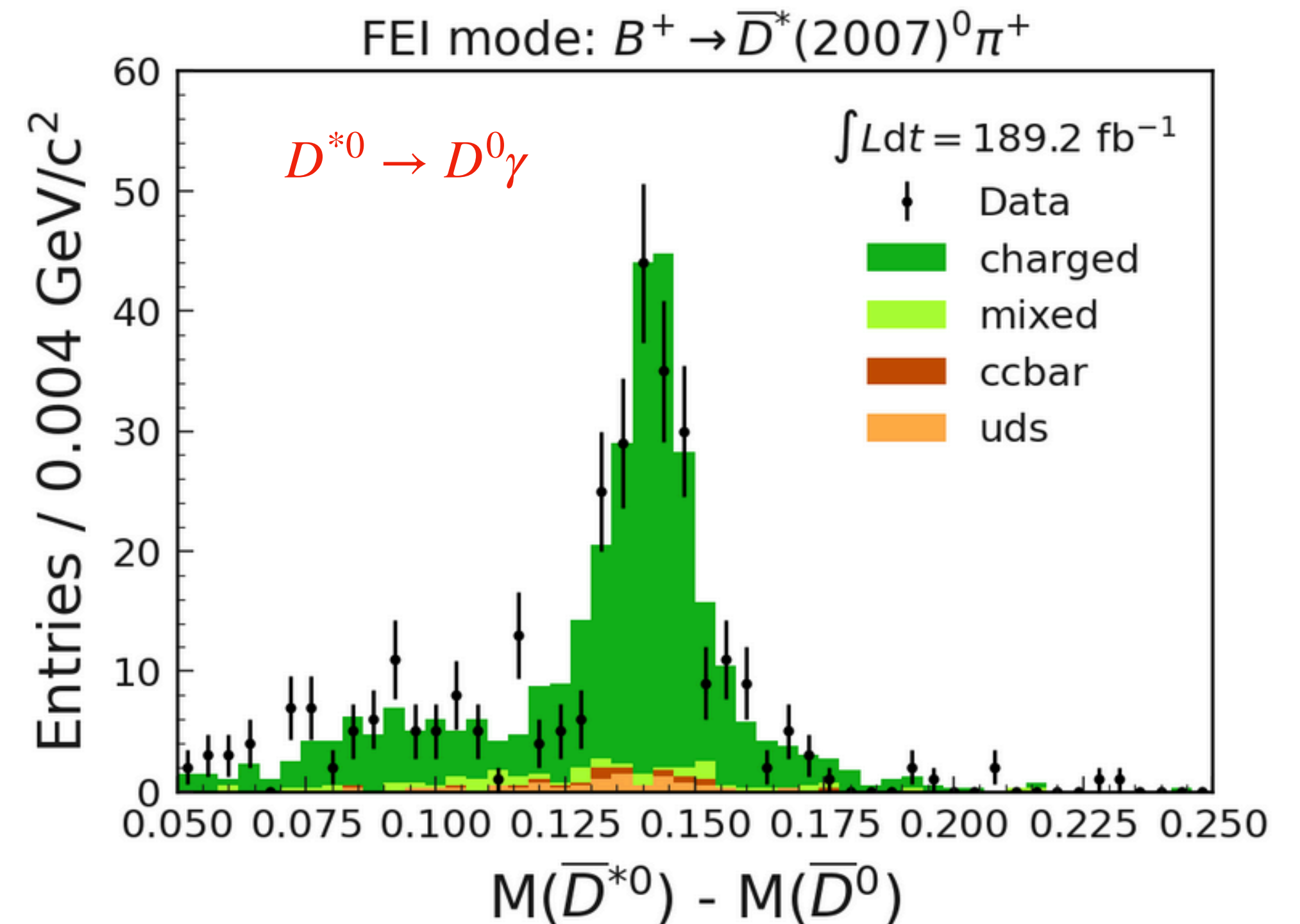
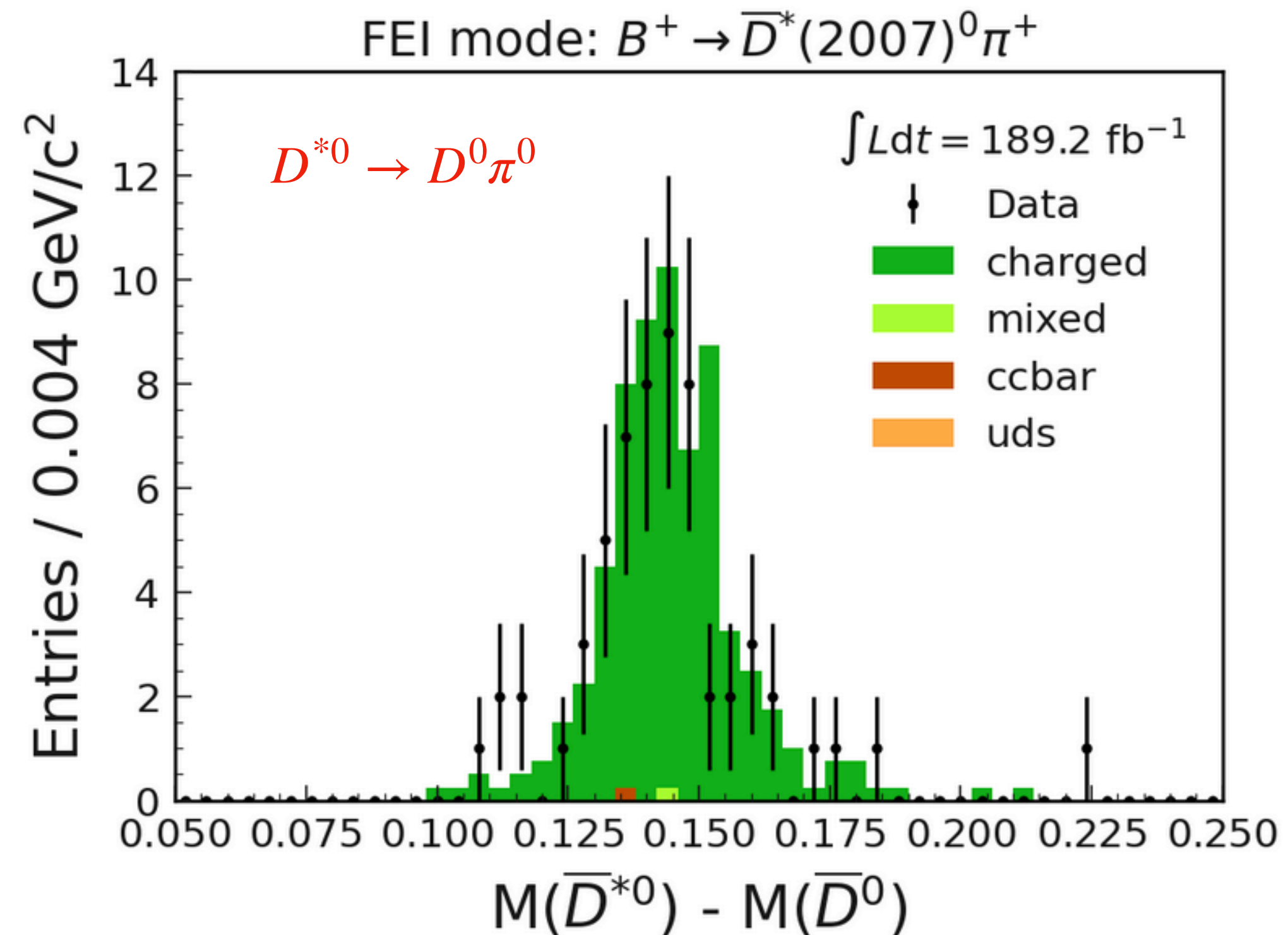
- The tighter γ cuts affects the slow π^0 efficiency in FEI?

Comparison with Belle

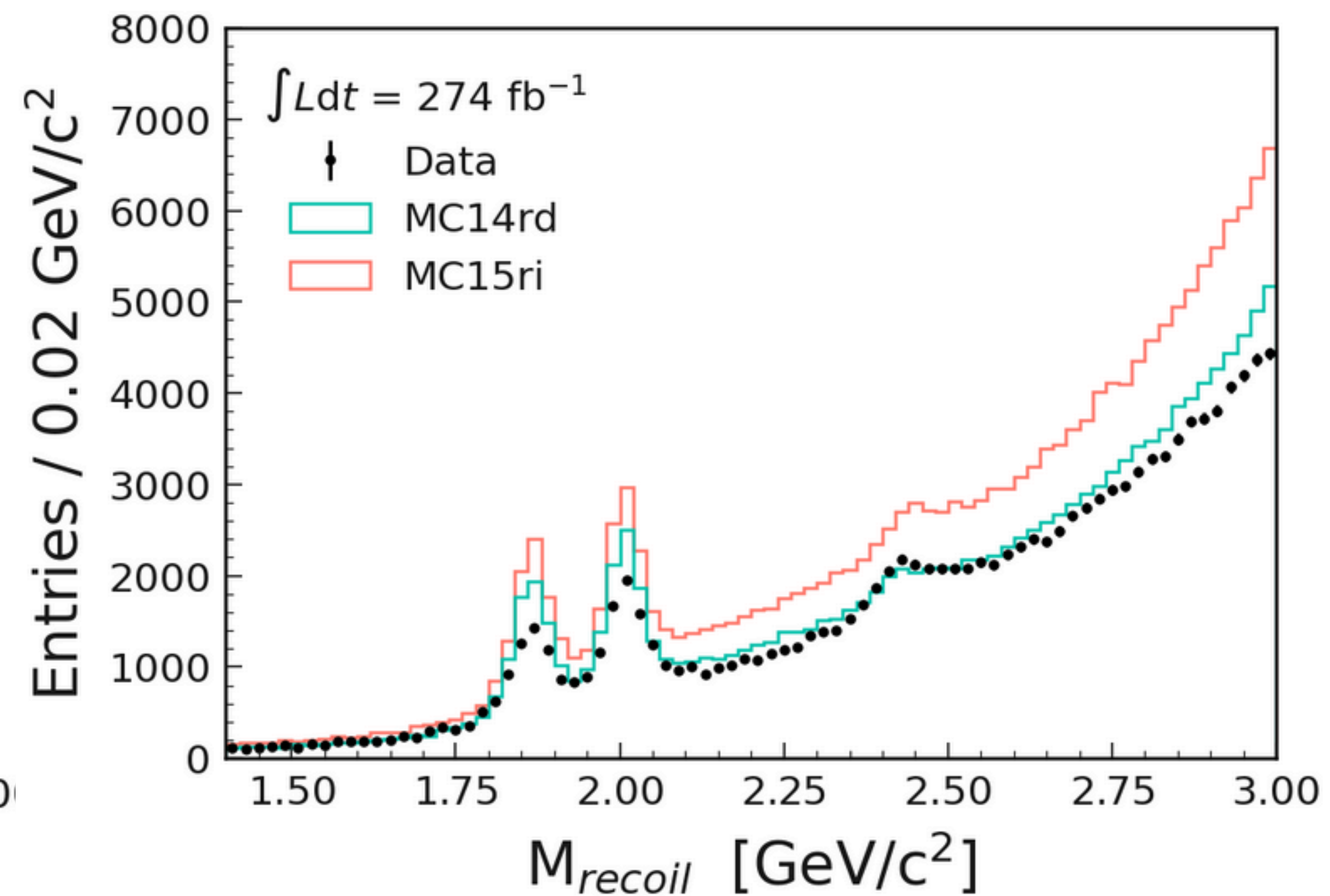
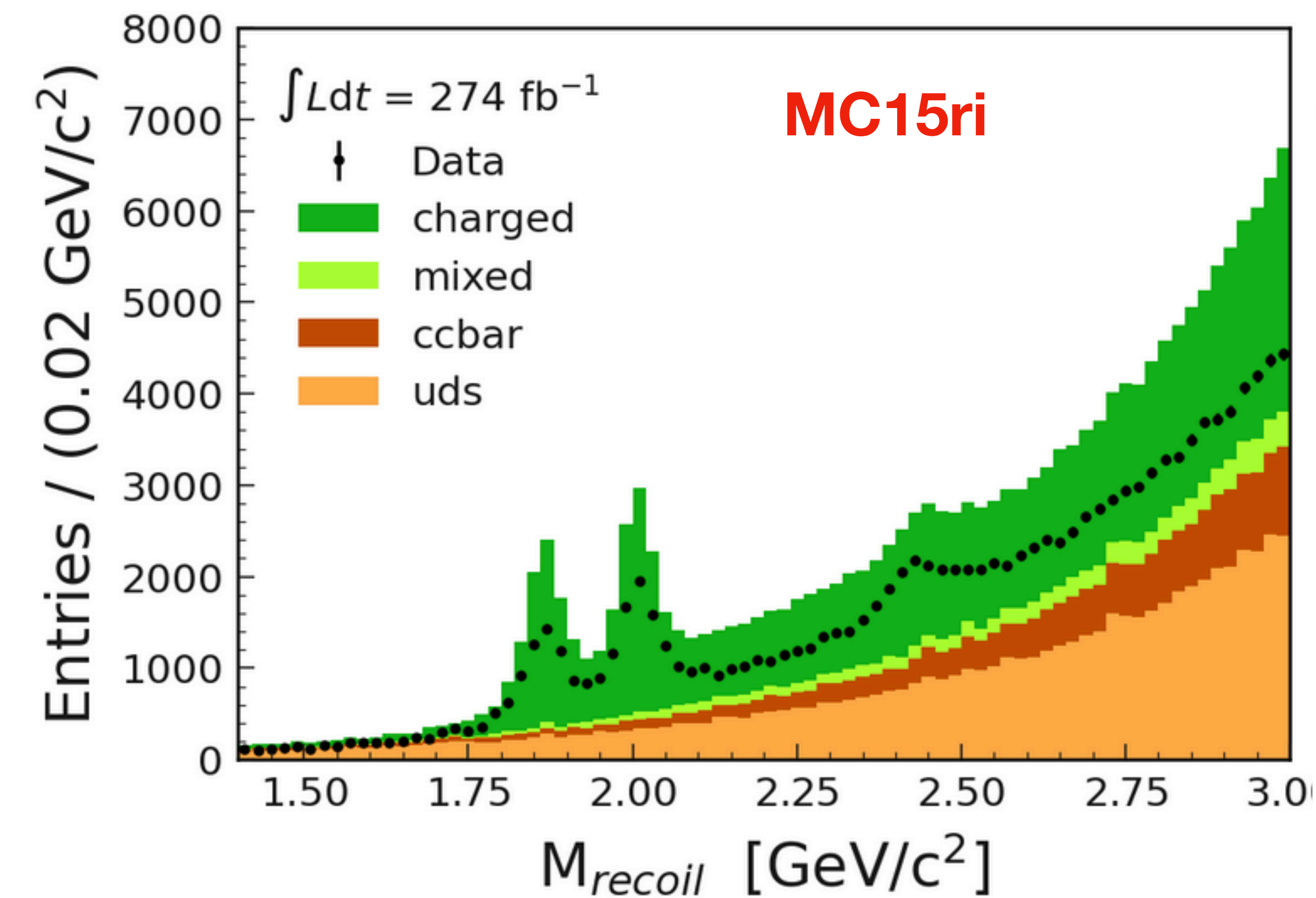
FEI pre-selection

```
if convertedFromBelle:
    gamma_cut = 'goodBelleGamma == 1 and clusterBelleQuality == 0'
else:
    gamma_cut = '[[clusterReg == 1 and E > 0.10] or [clusterReg == 2 and E > 0.09] or [clusterReg == 3 and E > 0.16]]'
if specific:
    gamma_cut += ' and isInRestOfEvent > 0.5'
```

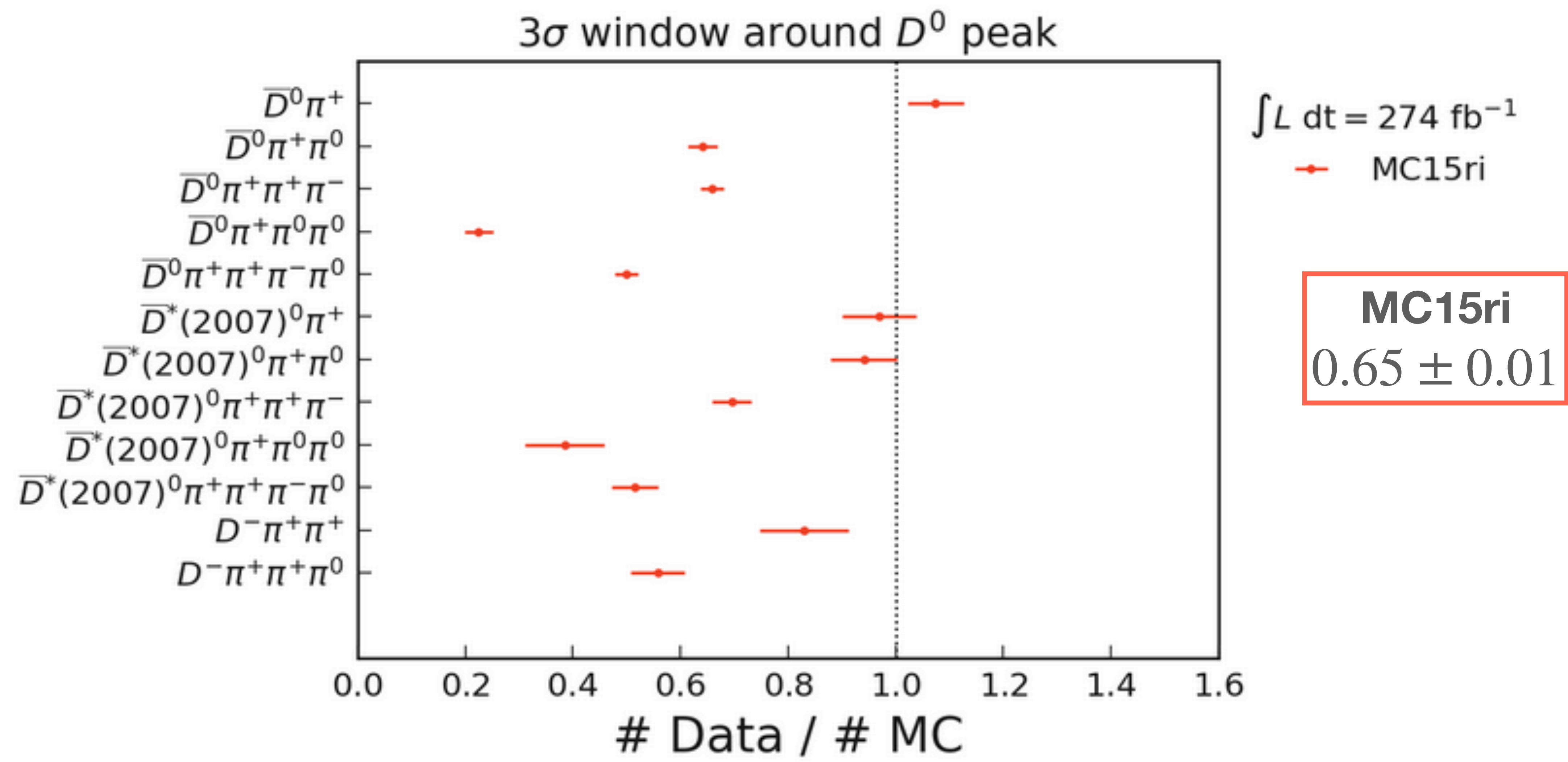
No pi0 mass constraint fit



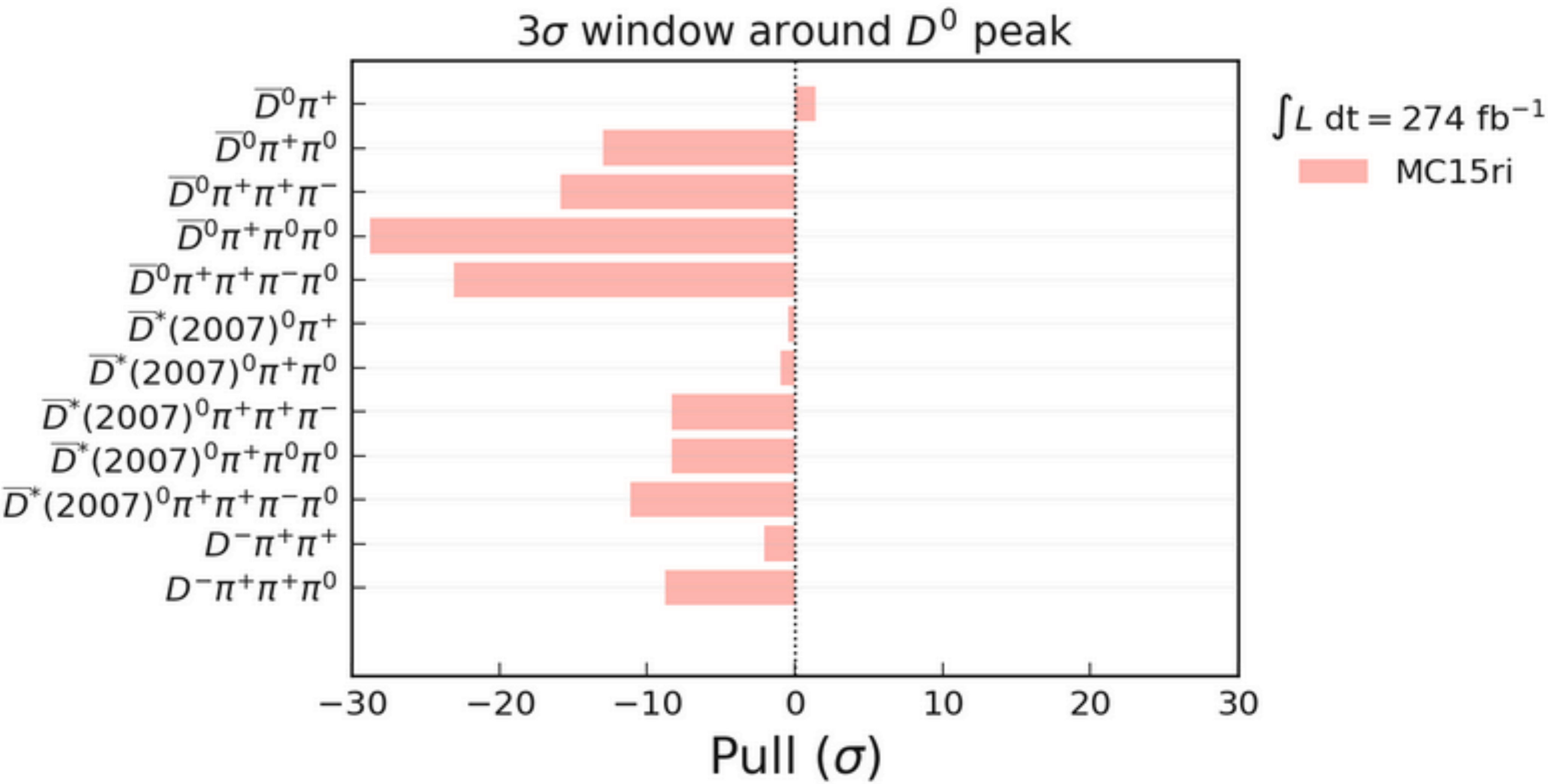
M_{recoil}



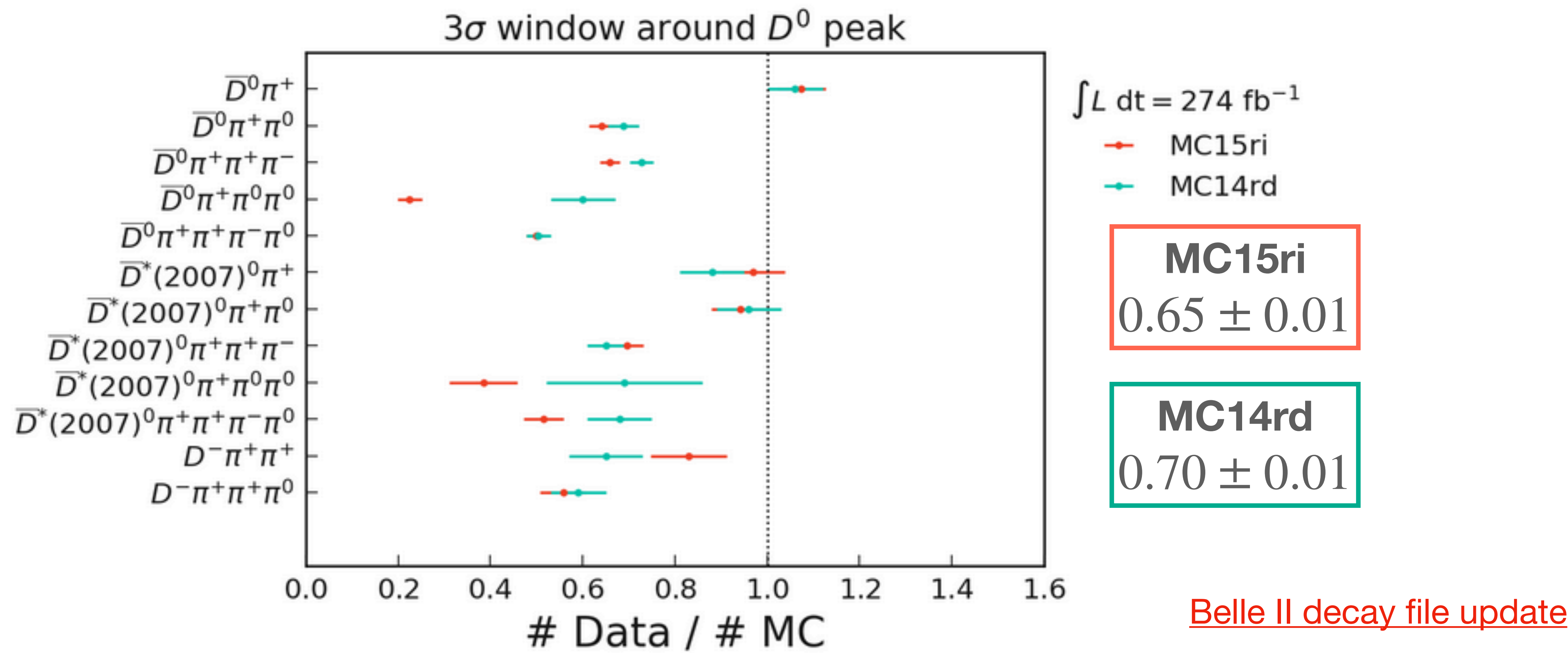
Calibration factors



Calibration factors



Calibration factors



Next step: compare PYTHIA contributions and apply the BR corrections to MC15 sample