## Cuts on truth level simulation



HMV0 0-0.1% (MC 3 decay, reco level)



HMV0 0-0.1% (MC 3 decay, truth level)



HMV0 0-0.1% (MC 4 decay, truth level)



## Results from Belle experiment (Phys. Rev. Lett. 127, 121803 (2021))



 $\Xi_c^0 \to \Xi^- e^+ \nu_e$ 

 $\Xi_c^0 \to \Xi^- \mu^+ \nu_\mu$ 

 $0.730\pm0.021$ 

 $0.708 \pm 0.033$ 

#### ALICE results

 $M_{\Xi\mu}$  (GeV/c<sup>2</sup>) measurement of the  $\Xi_c^0$ -baryon cross sections, not 5,1) xd by the BRs, in the two different decay channels allowed the computation of the BR( $\Xi_c^0 \to \Xi^- e^+ \nu_e$ )/ BR( $\Xi_c^0 \to \Xi^- \pi^+$ ) ratio. The  $p_T$  -dependent ratio of the two measurements, which was observed to be flat in  $p_T$ [49], was averaged over  $p_T$  using the inverse uncorrelated relative uncertainties as weights [53]. The final systematic uncertainty on the ratio was obtained by summing in quadrature the  $p_T$ -correlated and uncorrelated systematic uncertainties. The measured ratio is BR( $\Xi_c^0 \to \Xi^- e^+ \nu_e$ )/ BR( $\Xi_c^0 \to \Xi^- \pi^+$ ) = 1.38  $\pm$  0.14(stat)  $\pm$  0.22(syst). The result is consistent with the global average reported by the PDG (1.3  $\pm$  0.8) [30] and has a total uncertainty reduced by a factor of 3. The result is also consistent with the one released by the Belle Collaboration [54].

## Background subtraction (MB)

#### INEL0\_MB\_0to100, 4 < pT < 6







INEL0\_MB\_0to100, 2 < pT < 4

# Background subtraction (HMV0)





INEL0\_HMV0\_0to0p1, 12 < pT < 24





