

Physics and Simulations

- HF MDC1 production is finished, 100M+ events in storage
 - Lots of work being done in charm sample; interesting thoughts for sPHENIX/MVTX
1. Can we look at D^+ and D_s^+ for different number of MVTX hits?
 2. Can we use ΔE for inclusive fits without PID?
 3. Can we perform a Dalitz analysis?

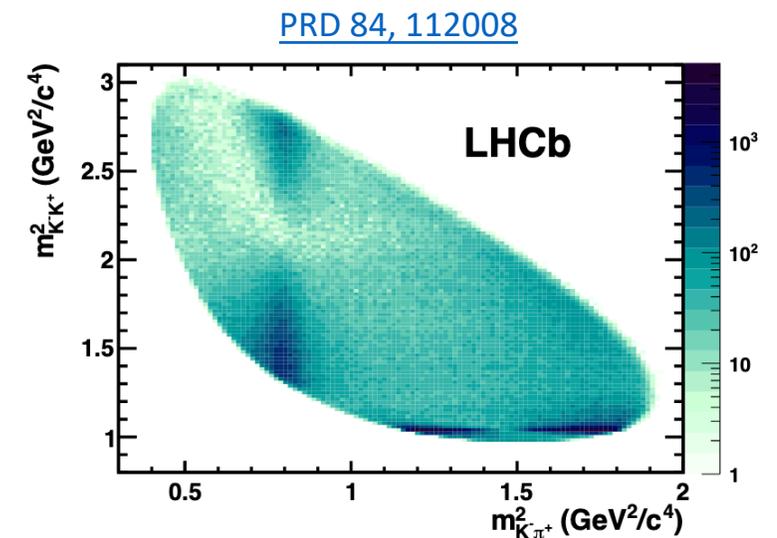
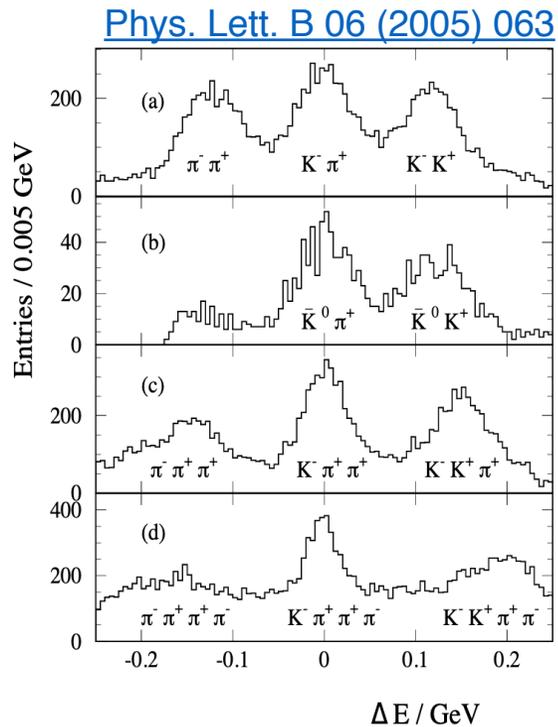
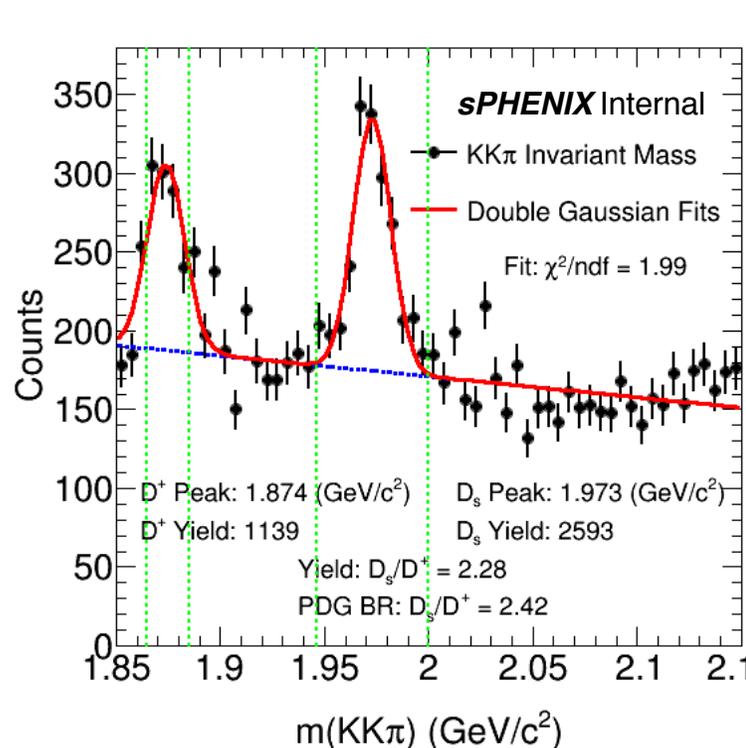


FIG. 2. Dalitz plot of the $D^+ \rightarrow K^- K^+ \pi^+$ decay for selected candidates in the signal window. The vertical $\bar{K}^*(892)^0$ and horizontal $\phi(1020)$ contributions are clearly visible in the data.

3D DCA distribution

- I looked at the cumulative 3D DCA of all tracks wrt a PV
- This is the minimum 3D-DCA for all PVs
- Used 400 events with low multiplicity
- 5404 tracks with 3945 in plot (rest are $> 1\text{cm}$)

If this is all tracks,
why don't we peak at
0?

