

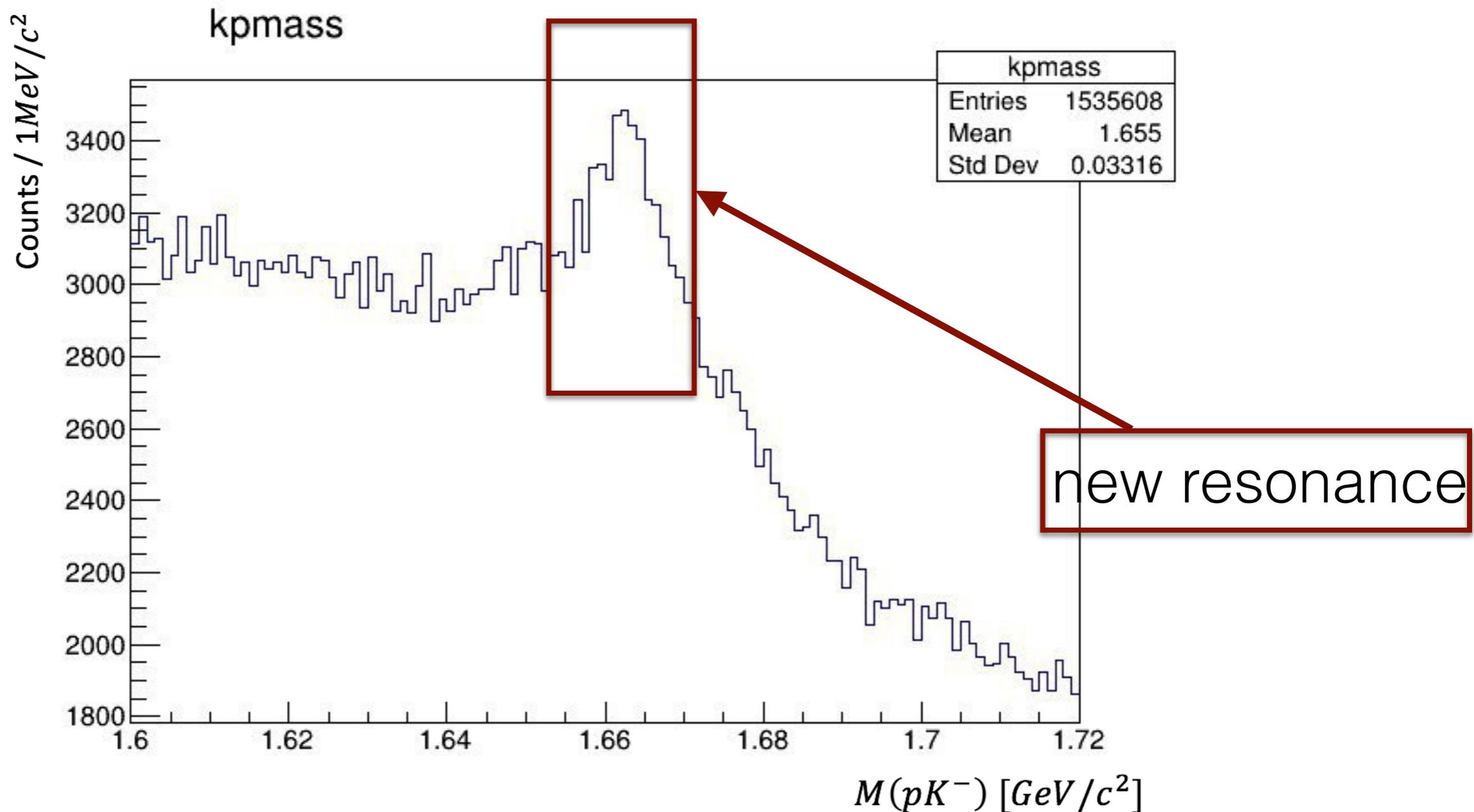
# A new possible resonance at Belle

2017. 02. 01  
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# Analysis Progress

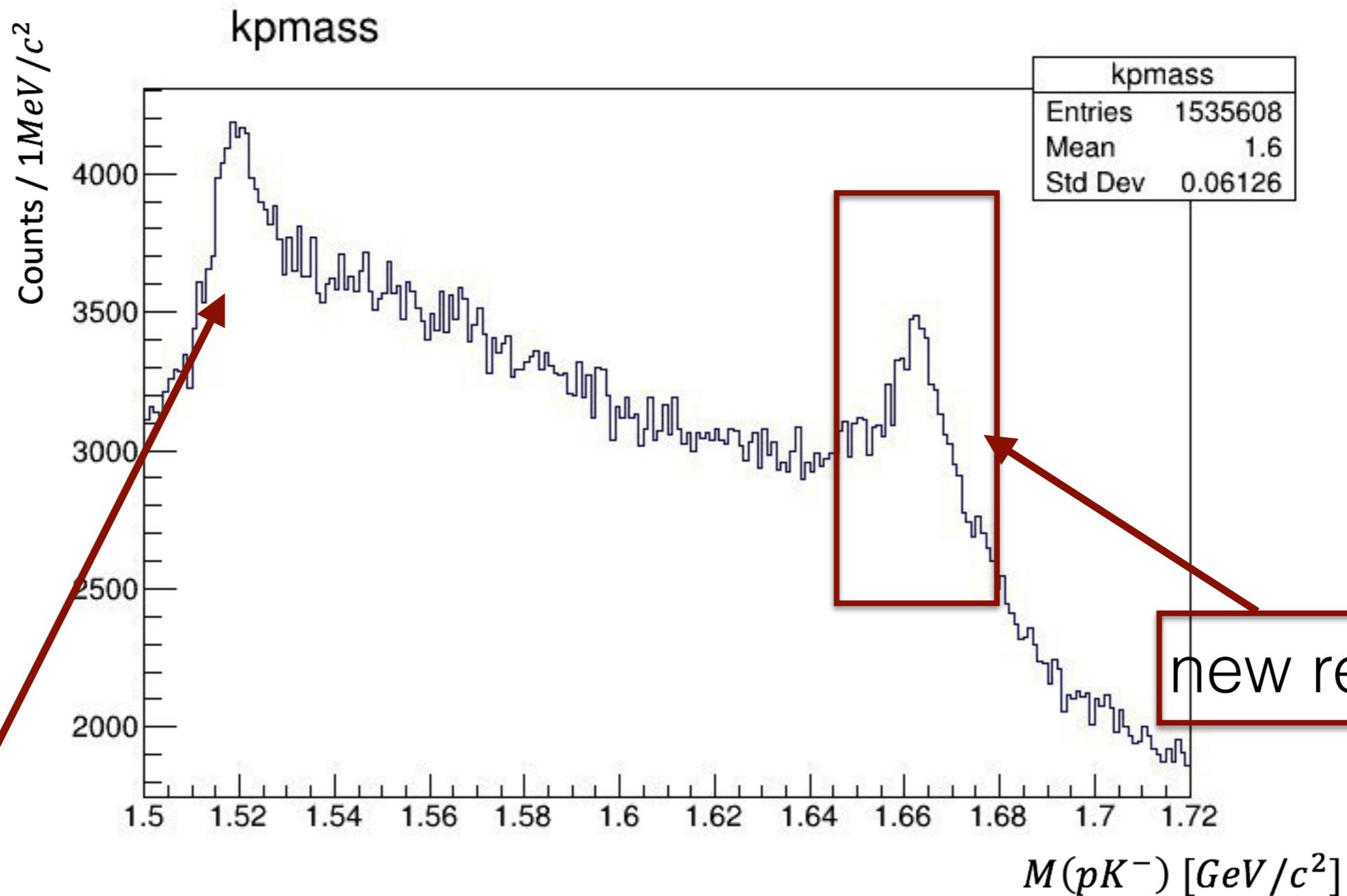
Step 1. Reproduce Seongbae's result

Invariant mass of  $pK^-$  from  $\Lambda_c^+ \rightarrow pK^-\pi^+$



$\Lambda_c$  mass gating:  $\Lambda_c^+$  mass  $> 2.2805$  &&  $< 2.2925$  GeV

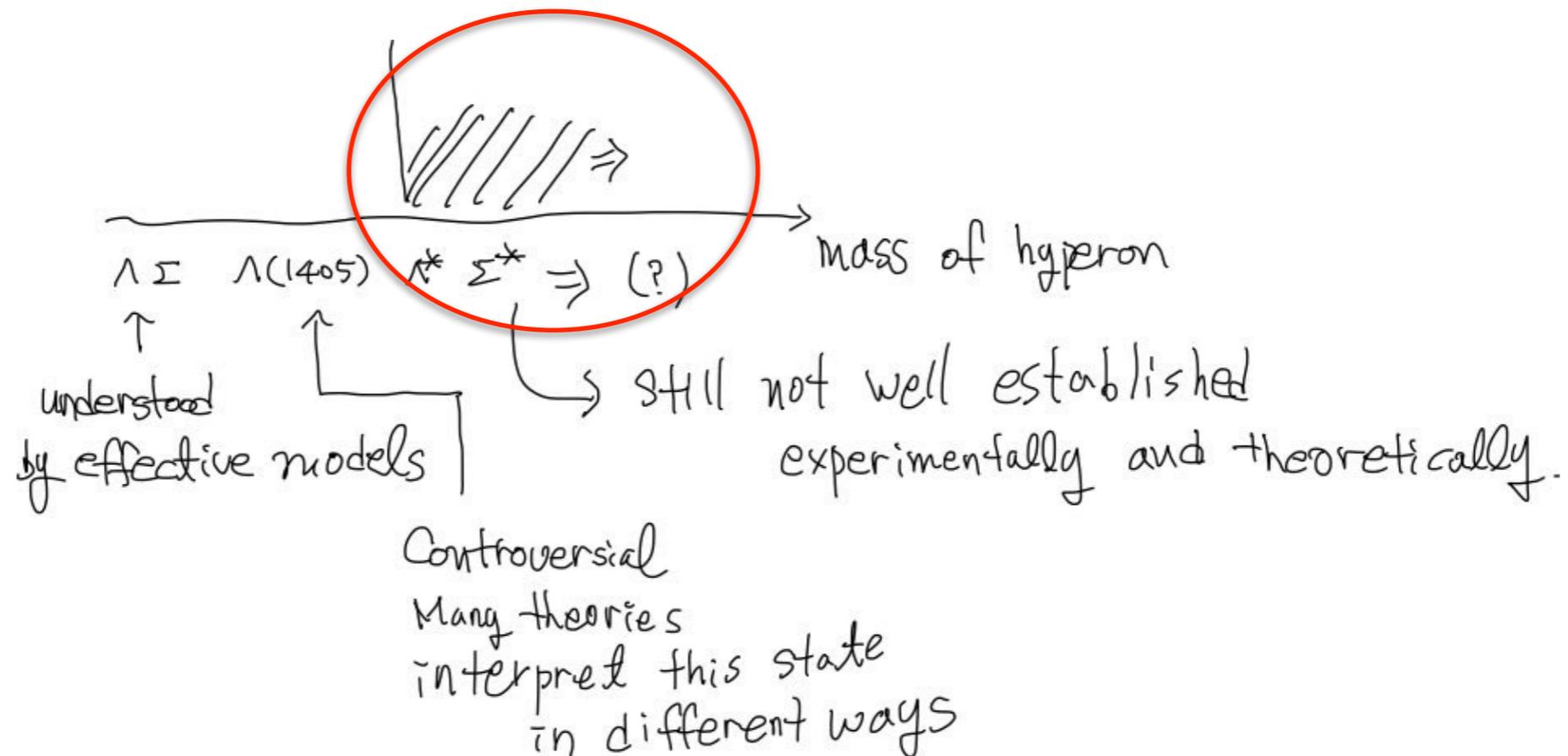
Invariant mass of  $pK^-$  from  $\Lambda_c^+ \rightarrow pK^-\pi^+$ , wide range



$\Lambda(1520)$  looks a good option for optimization

# Why new hyperon resonance is important?

- QCD, a theory of strong interaction, in high E region
  - QCD treated perturbatively
  - Theories and data from experiments are quite consistent. (Good)
- However, in low E region (to understand hadron properties)
  - QCD treated non-perturbatively
  - Currently, most of hadron properties are understood by **effective theories based on QCD.**
  - Enormous works remaining in both theoretical & exp. aspects.



# Report from the last trip

- Handover of silicon strip detector at J-PARC
  - done mostly. need to visit once more for about a week just before beam time. (Early April 2017)
- SNU car sale at J-PARC
  - all done.
- IPMU visit to meet the boss (Prof. Higuchi)
  - Discussed SVD development for Belle 2
  - April is a good time for me to contribute to SVD work (about 3 weeks)