

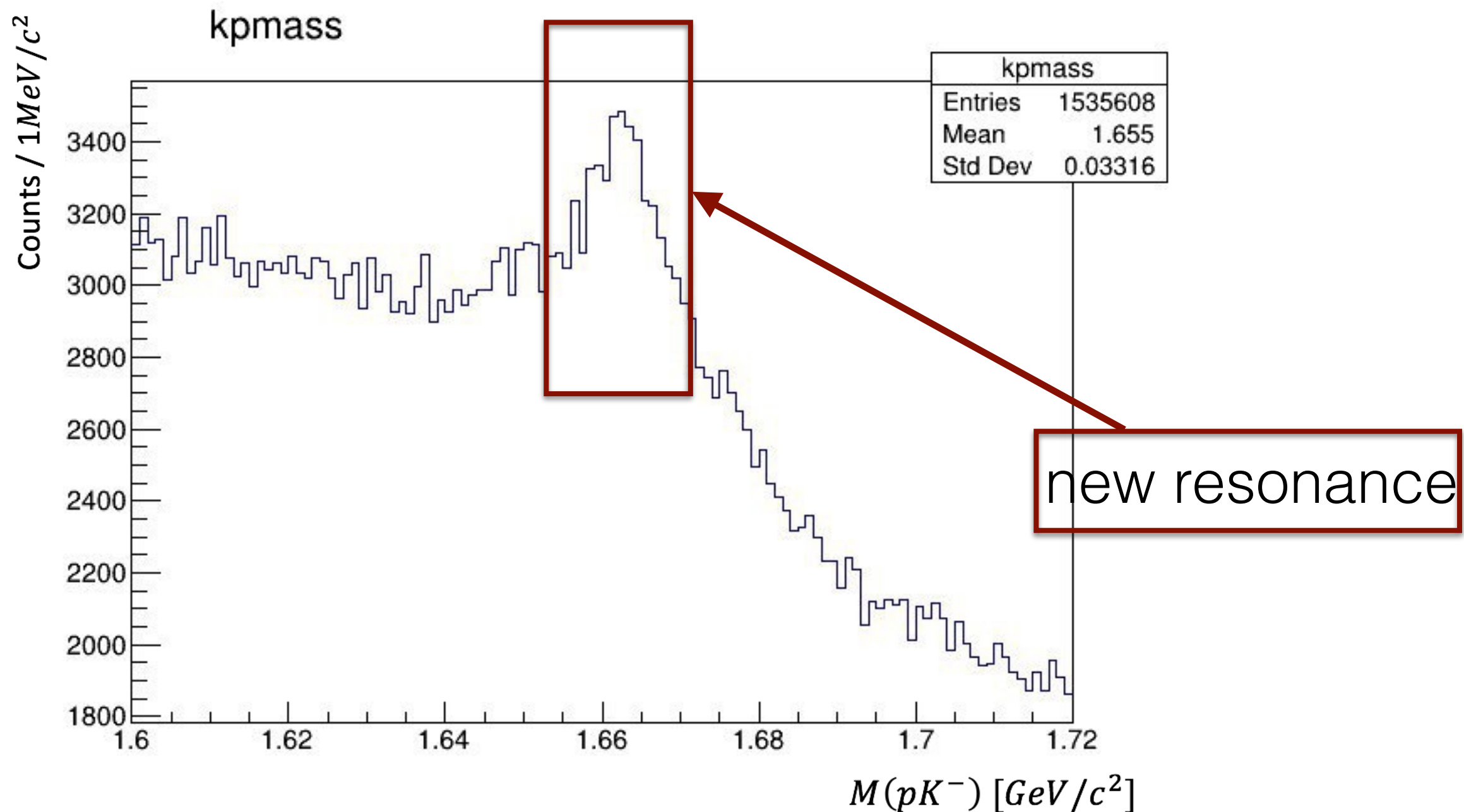
A new possible resonance at Belle

2017. 02. 01
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Analysis Progress

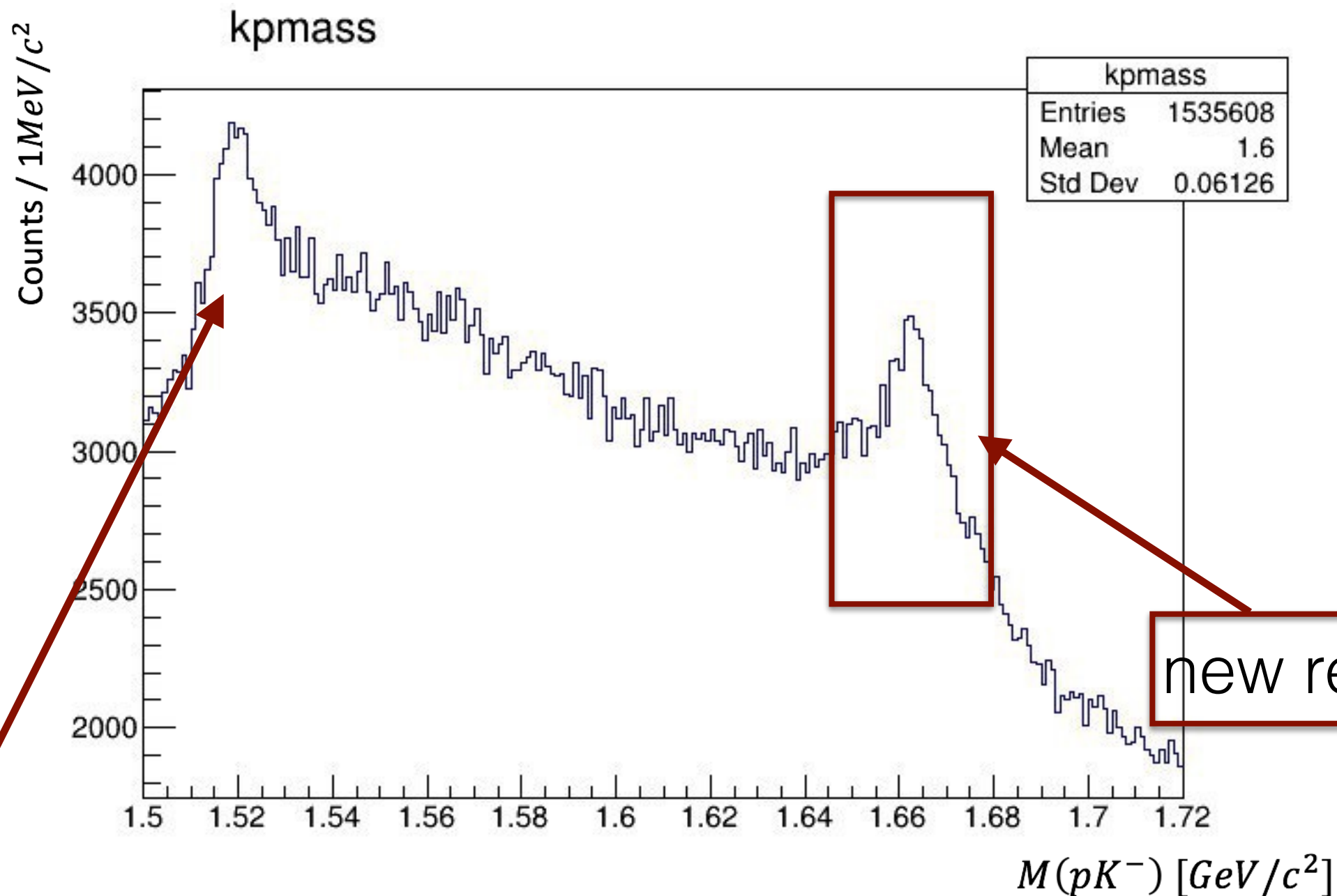
Step 1. Reproduce Seongbae's result

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



Λ_c mass gating: Λ_c^+ mass > 2.2805 && < 2.2925 GeV

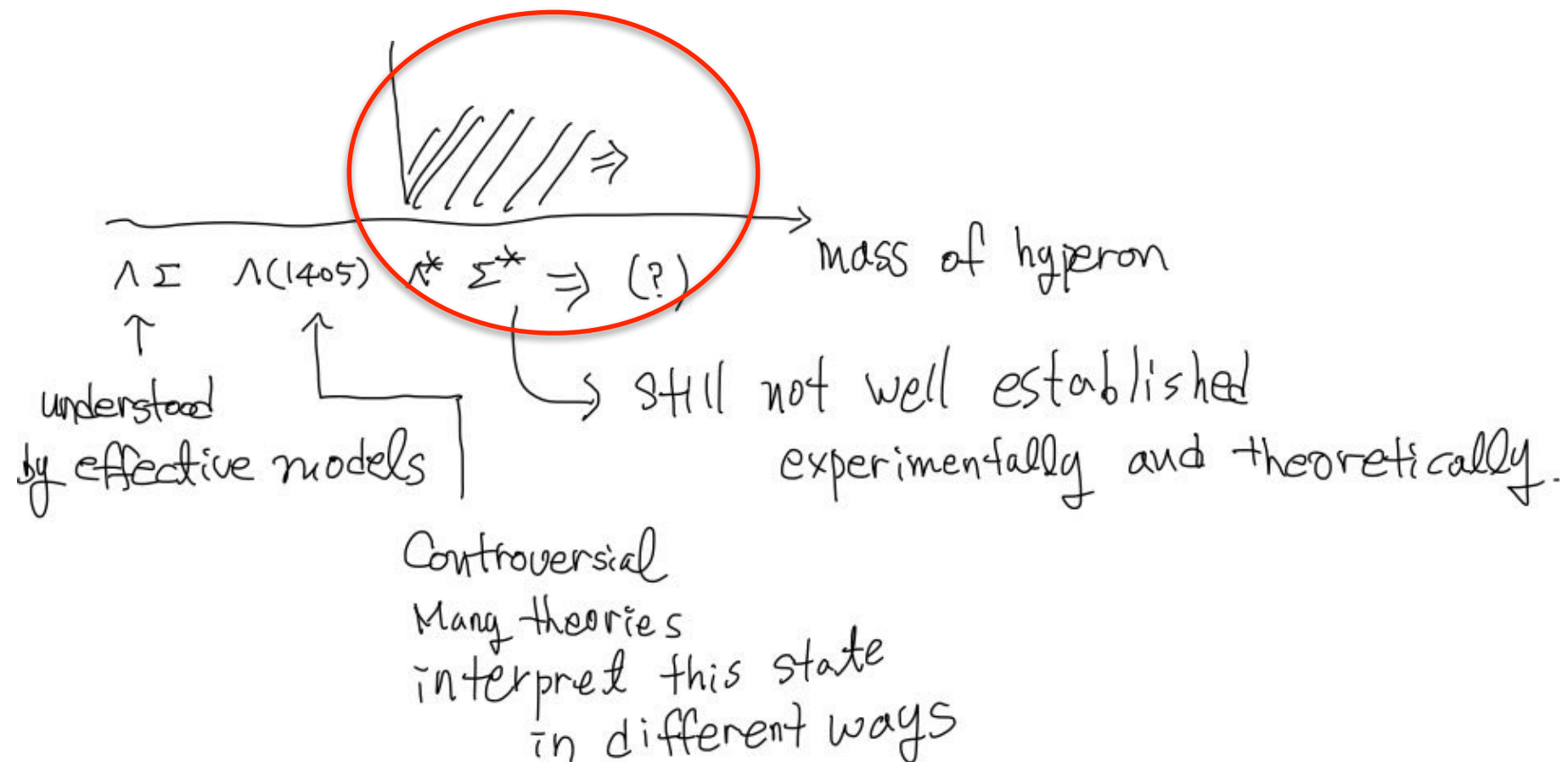
Invariant mass of pK^- from $\Lambda_c^+ \rightarrow pK^-\pi^+$, wide range



$\Lambda(1520)$ 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)