



スーパカミオカンデ  
*Super-Kamiokande*

# First Thoughts on $\pi^+$ Systematics

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# Hybrid sample

- Which data  $\pi^+/\mu$  should we use?
- How do we select data  $\pi^+$ ? No such sample exists at SK at this point.
  - Can we use  $CC1\pi^+/NC1\pi^+$  from the atmospheric data?
  - Can we select 2R as well as 1R  $\pi^+$ ?
- Other uses for atmospheric  $CC1\pi^+/NC1\pi^+$  as a sample of  $\pi^+$  at SK to constrain systematics?

# Cross Section Variations

- What is the effect of secondary interaction uncertainties on fitQun  $\pi^+$  selection?
- Use the cross section systematic variations framework that Patrick and Hiro developed for secondary interactions
- How does selection efficiency change as hadronic interaction cross sections are varied?
- Other uses?