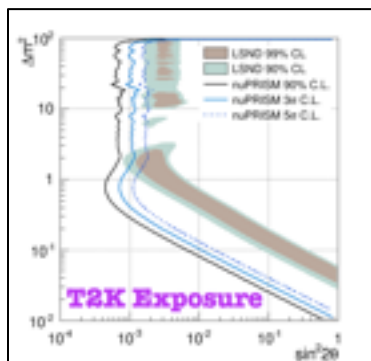


NuPRISM

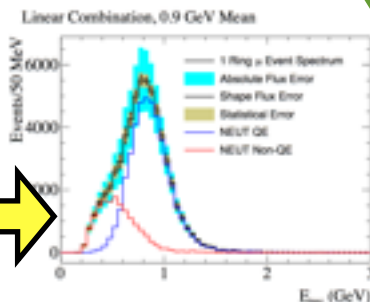
Spans many off-axis angles to measure many E_ν spectra

Sterile Neutrinos

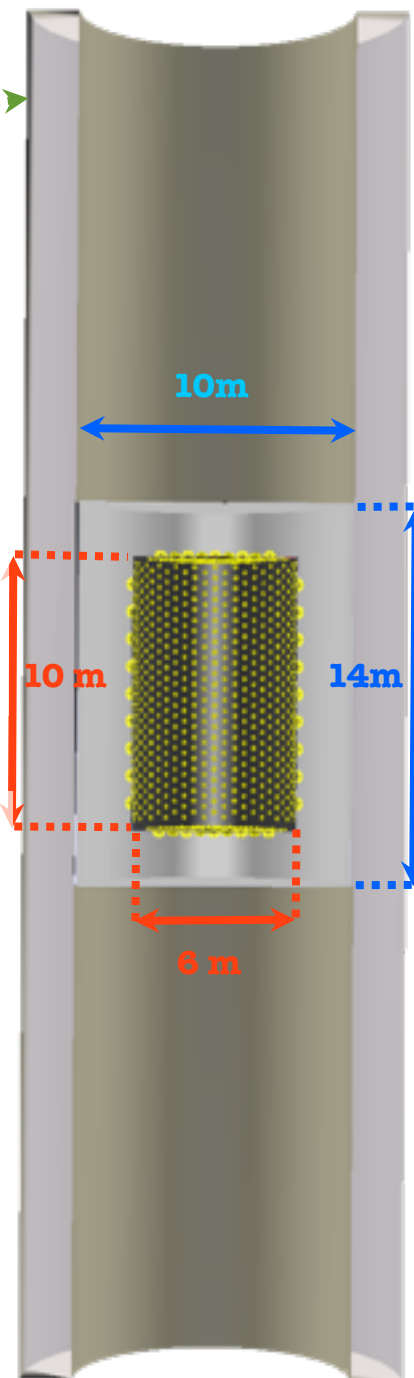
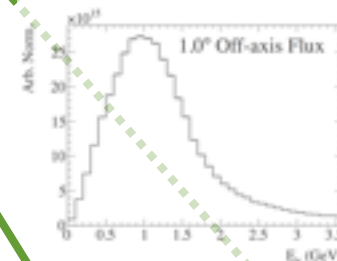
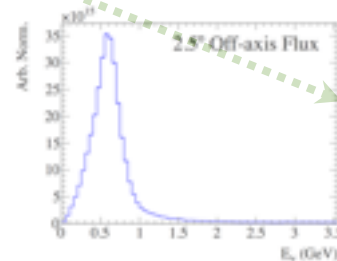
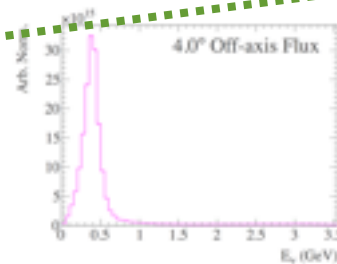
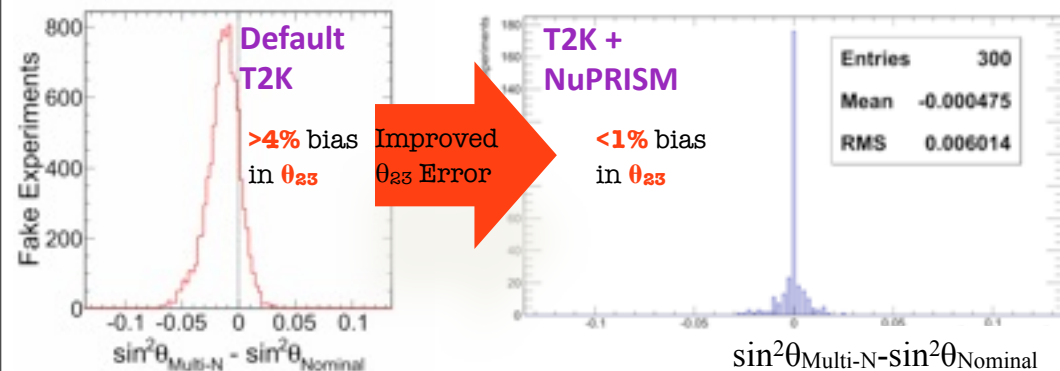


Unique σ_ν Measurements

- First ever measurements of $\sigma_{\text{Neutral Current}}(E_\nu)$
- Clear separation of single and multi-nucleon events



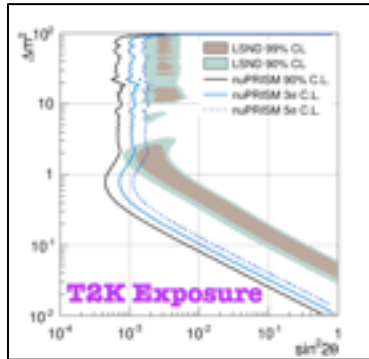
Enhanced Sensitivity for T2K and T2HK



NuPRISM

Spans many off-axis angles to measure many E_ν spectra

Sterile Neutrinos

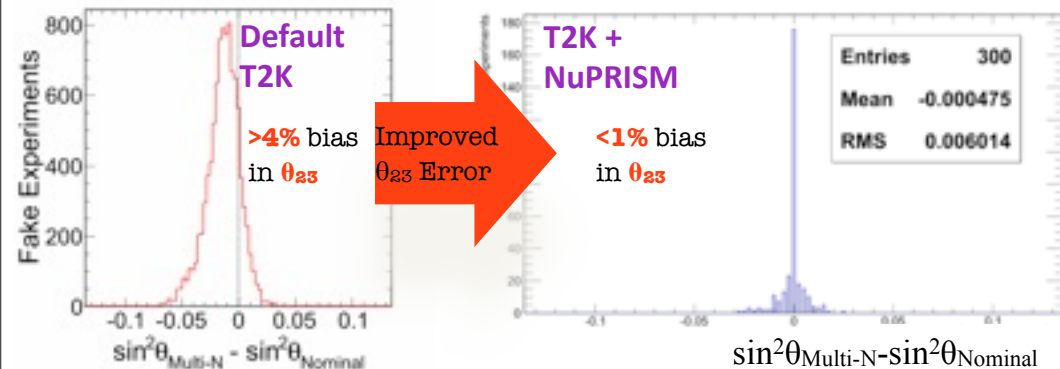


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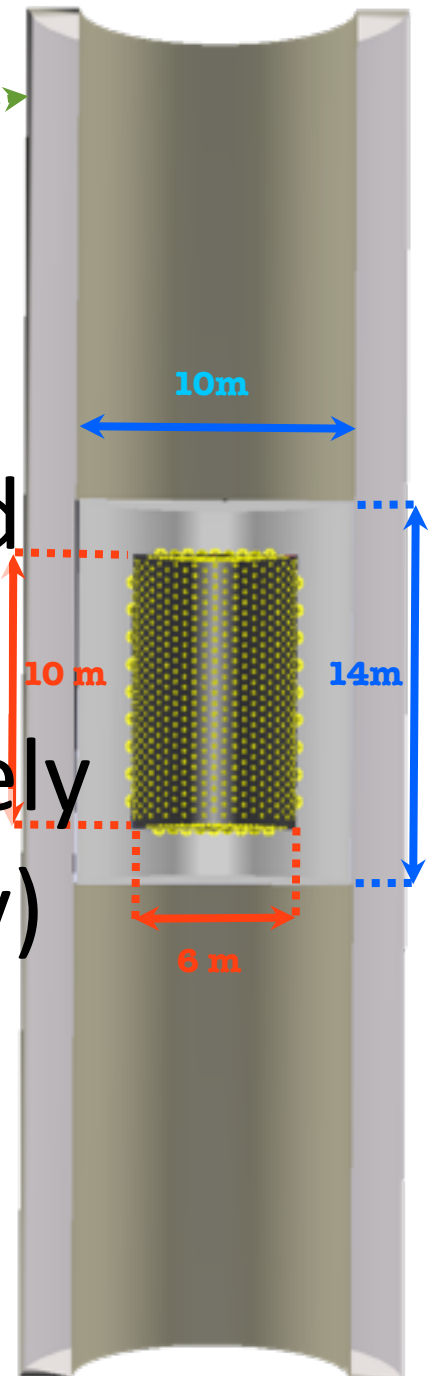
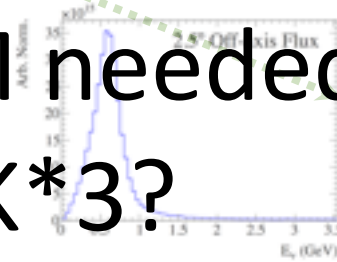
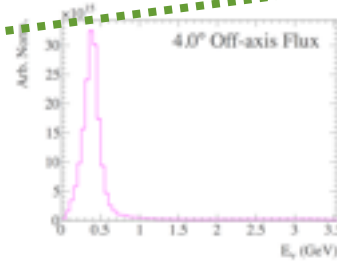


Enhanced Sensitivity for T2K and T2HK



Is NuPRISM needed for T2K*3?

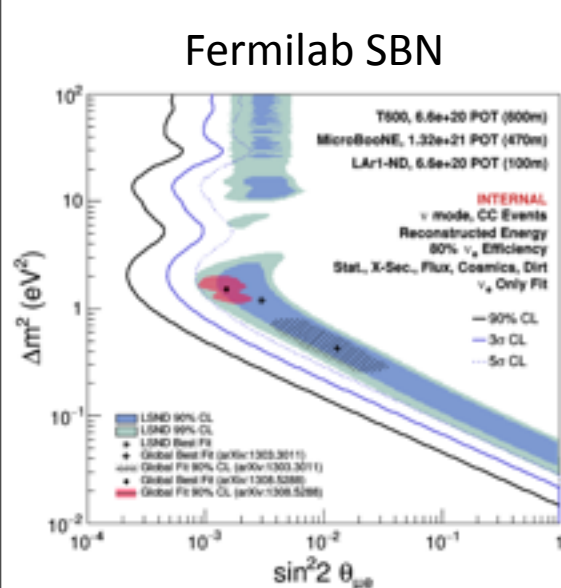
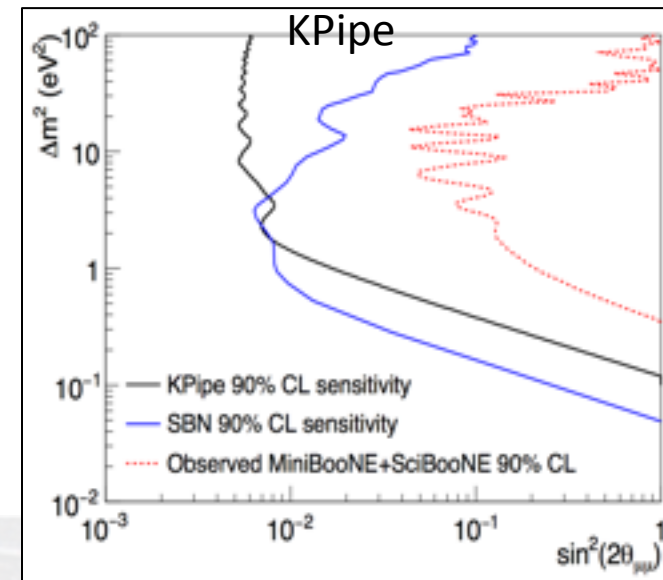
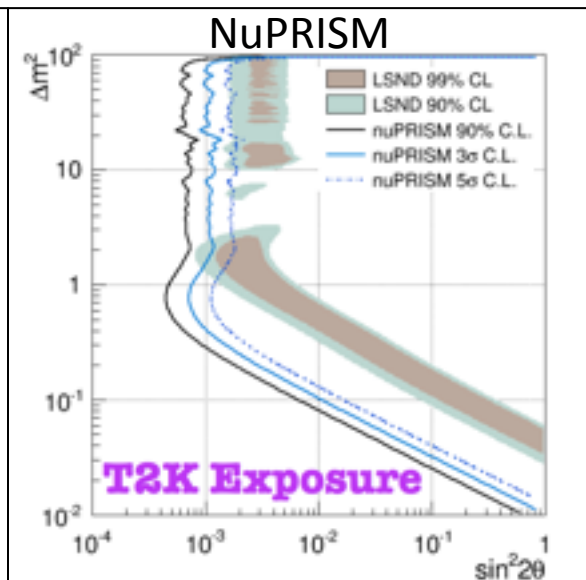
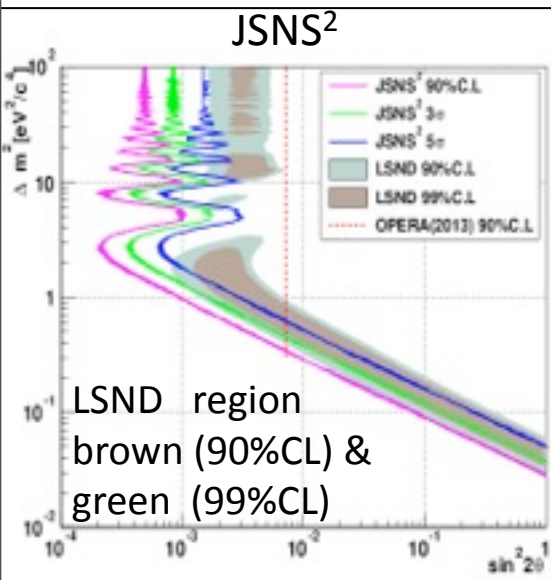
(Discussion was largely deferred until today)



Sterile ν Proposals at J-PARC

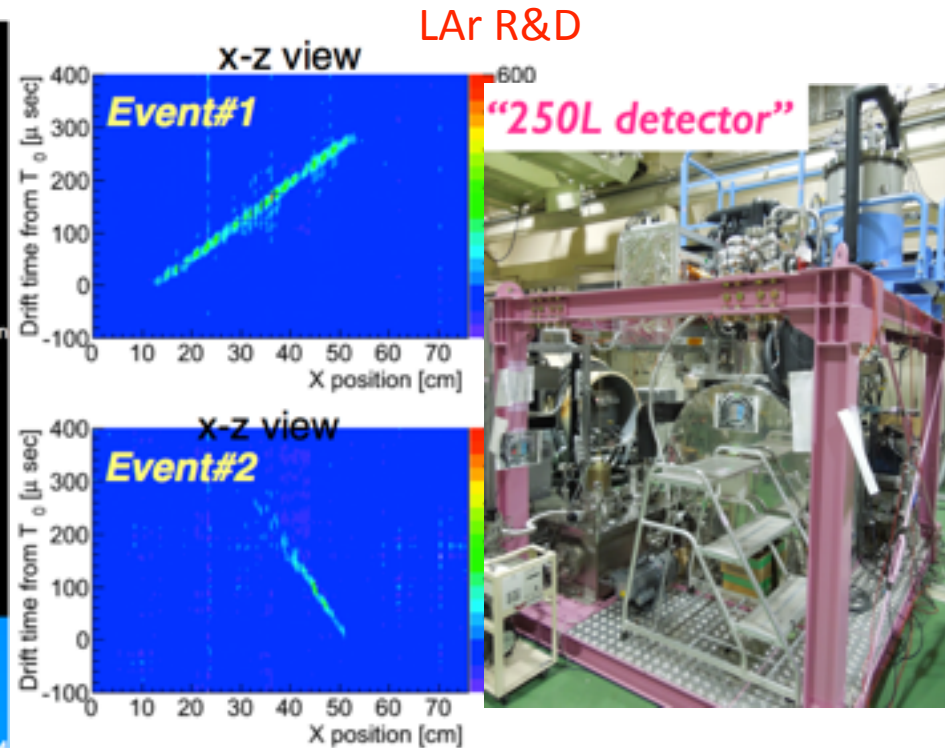
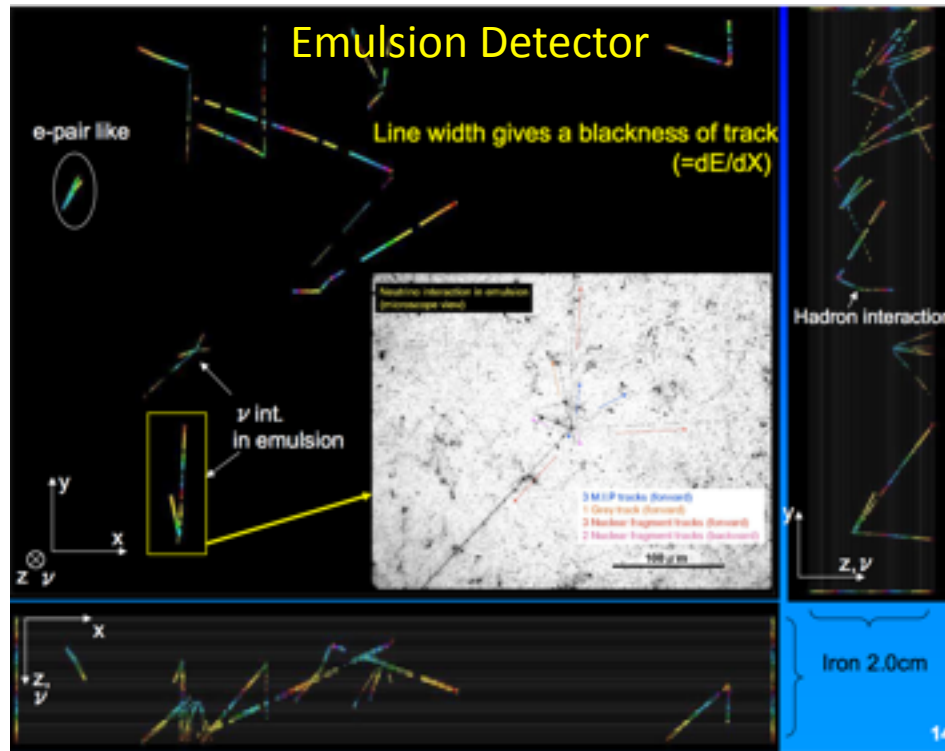
ν_e Appearance

ν_μ Disappearance



- JSNS2: a precise test of LSND anomaly with “no excuses”
 - Granted stage 1 approval by J-PARC/KEK
 - No need for civil construction: very cost effective and can be timely
- NuPRISM’s (very) conservative sensitivity is statistics limited, and strong in-situ background constraints are not yet incorporated into the analysis
 - Unique probe since signal and background vary differently with off-axis angle
- KPipe can observe the full oscillation pattern within a 120 m long detector
 - Very distinct signal to definitively confirm or refute sterile- ν oscillation

New Detector Technologies



- Emulsion detector provides detailed ν final state information
 - There is interest in an Emulsion + INGRID measurement
- LAr R&D: Important to continue fundamental detector research in Japan
 - Continue collaboration toward international, large scale LArTPC

“Other” ν at J-PARC Discussion

General Topics

- In which ways are these experiments both complement, and compete against, other experiments
 - At J-PARC
 - Worldwide
- Will the timescales for each experiment allow for a sufficiently timely measurement?
- What resources are required in terms of manpower, money, and facilities to execute these experiments?
- Comments on programmatic priorities for J-PARC?
 - How might these proposals fit in?
- Kpipe
 - ν_μ disappearance complementarity to other sterile searches important?

Experiment Specific

- NuPRISM
 - What is the feasibility of T2K reaching 3% systematics?
 - Is NuPRISM needed for T2K*3?
 - Do the sterile- ν and nuclear physics make the project more worthwhile?
- T60 (Emulsion)
 - Can T60 help ν -nucleus understanding? (high granularity, number of protons, low E thresh, magnetized ν /anti- ν separation)
 - Comments on an Emulsion+INGRID measurement?
- LAr R&D
 - Importance of continuing fundamental detector R&D in KEK/Japan? (continue collaboration toward international, large scale LArTPC)
- JSNS² / J-PARC E56
 - Complementarity with Fermilab SBN?