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nuPRISM cross section discussion

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EOI measurements

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- CC inclusive
- CC0π
- CC1π+, π^0
- NC1π+, π^0
- NC1gamma (with intrinsic nue constraint from numu)

numu measurements, but CC nue possible for some channels

Antineutrino measurements possible

Statistical separation of resonant, coherent channels

No studies of cross section precision vs. Enu or muon, pion kinematics

- Event rate provided for different interaction modes vs. off-axis angle. Previous measurements vs. Enu shown

Full proposal modifications

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Studies we could consider adding:

- Can we make linear combinations of the fluxes to study the hadronic system? Pion multiplicity, kinematics in suitable slices?
- Determine precision of ratio of nue/numu?

Full proposal modifications

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What other information is useful to add?

- Selections would need to be developed for many of the channels mentioned to prepare an estimate of cross section determination
- Pion statistics for pion channels vs. off-axis angle?
- Add determination of F_A for CCQE (since we can actually determine true CCQE)
- Cross section measurements for proton decay, atm nu?

Gd doping?

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What, if anything should we add for this scenario?

- Would be nice to measure neutron multiplicity... however
- What is the pileup of CC interactions (associating neutron to correct CC vertex and flux)
- Rate of neutrons from outside the detector entering (ANNIE will have a small FV)