

Feedback from LBNC on CDR-lite

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**Comments refer to
DUNE DocDB 12841**



General

- Staging
- Nu-e/nu-mu xsec ratio
 - We don't discuss. Why not? Is it not important?
- Rock muon rate calcs for all detectors
- EMC effect
- More clarity needed re removal of model dependence and near to far detector differences
- Inefficiencies due to pileup on axis?
- Defend magnet choices
- Skyshine neutron calculation
- Want more on detector movement issues in spite of early design stage
- Want numbers for requirements table



3DST-S

- Have not made case for why 3DST-S should be so capable and why different technology from moving detectors.
- How are neutrons measured on carbon useful for oscillation measurements on argon
- Performance of 3DST-S for beam monitoring:
 - Performance for beam direction
 - Why is rate plus beam direction not sufficient?
 - Can DUNE-PRISM alone handle with on and off-axis running?
 - Why not a LAr on-axis monitor instead?
- Charge separation not coming thru in case or being dismissed



MPD

- Questions:
 - Gas mix
 - Occupancy
 - TPC/ECAL linking
 - Neutron efficiency needs to be fn of neutron KE
- Why high pressure needed?
- Gamma conversion rate and backgrounds
- Pizero/electron mis-ID rate and how applies to FD
- Neutrons, more clarity needed, function of KE and energy performance, TOF resolution
- ECAL design, clarity on channel count and backgrounds, cost



LArTPC

- Stats, occupancy, on and off axis
- Pizero peak setting electron energy scale
- Multiple event/neutron association
- Large outside gamma background?



PRISM

- Stats table
- More clarity needed re removal of model dependence and near to far detector differences
 - How does differing F and N detector response factor into this?
- Why 30 m? Why not 20? Justify
- Effect of large outside gamma background feeds skepticism
- Data taking while moving ridiculed

