

Fermilab will look for sterile neutrinos through LAr1 (with MicroBooNE as a near detector) and MINOS+

MicroBooNE + LAr1

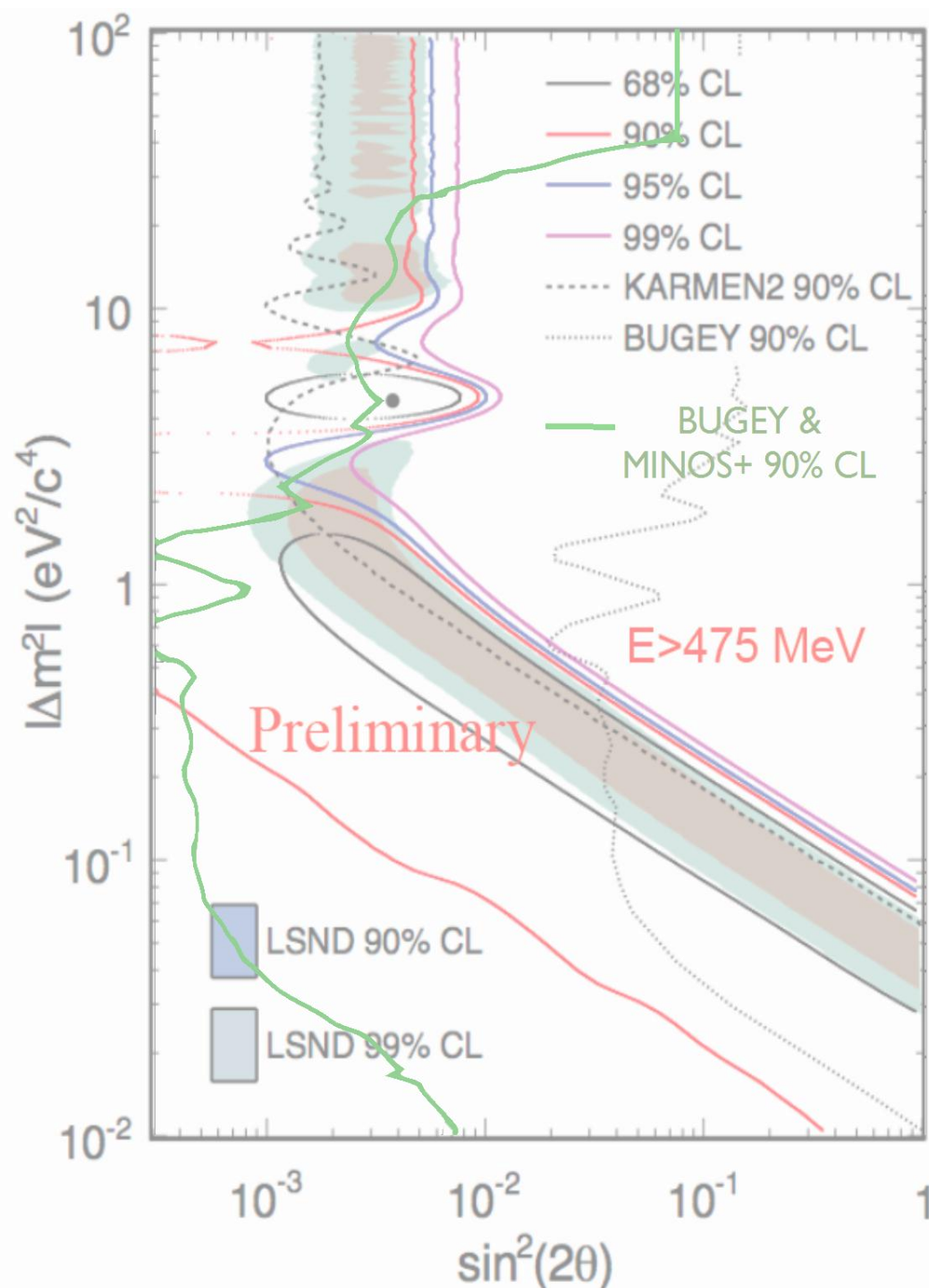
19E20 PoT = 4-6 years for 680ton fiducial volume (~1-2kton total)

Statistical Errors only – covers the entire region particularly well at high Δm^2

LAr1 also serves as an engineering prototype for LArTPCs for Long Baseline physics

(ie: LBNE, Soudan LBNE, GLADF)

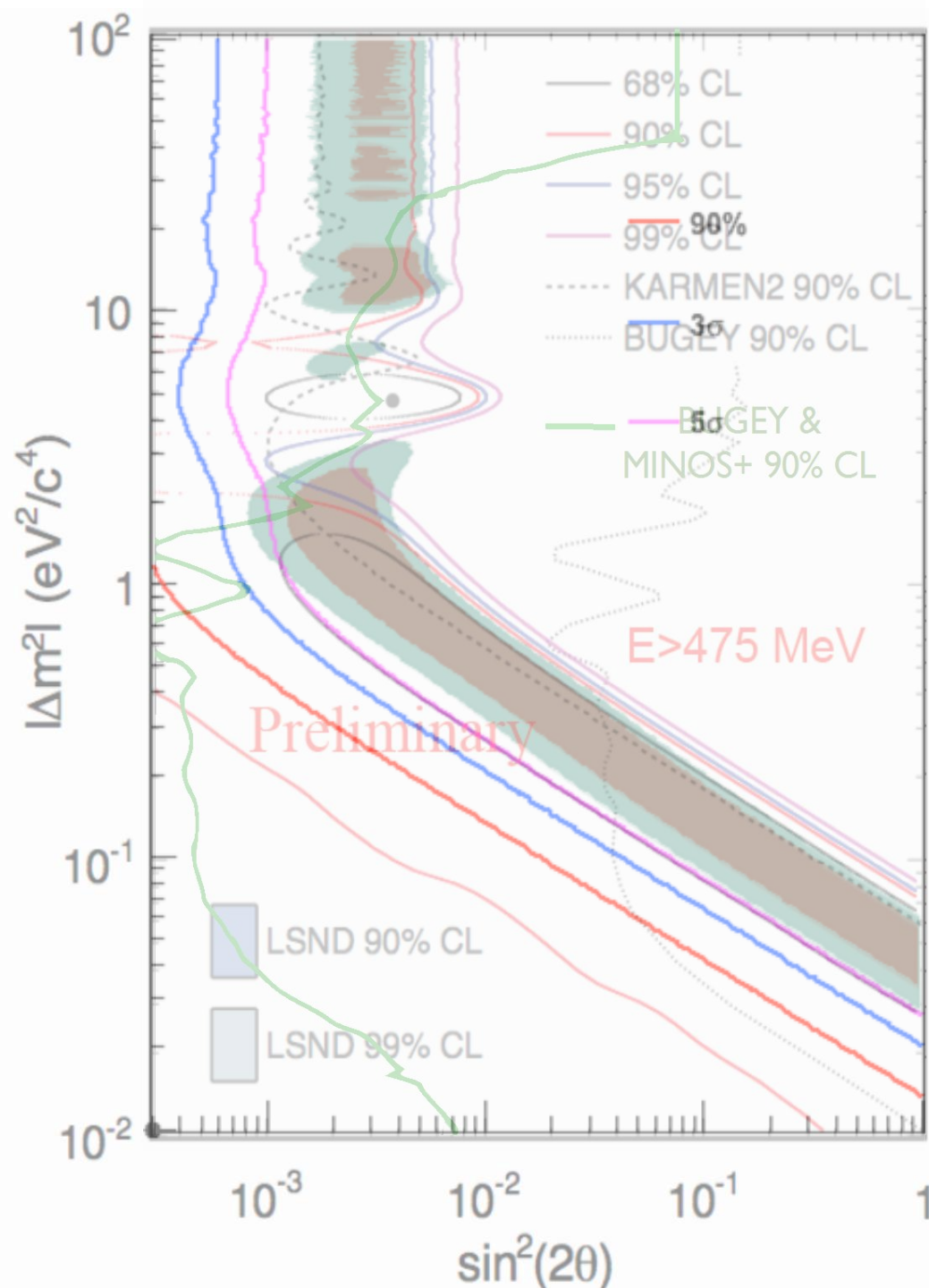
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MINOS+

MINOS+ plus Bugey which does very well at low Δm^2

90% Confidence level



Purple line is MicroBooNE + LAr1 at 5 sigma (stat only)

MINOS+ + Bugey is the Green line at 90% Confidence level

Together they cover the LSND allowed region and the MiniBooNE anti-neutrino region with MicroBooNE +LAr1 best at high Δm^2 and MINOS+ best at low Δm^2