

Probing physics behind the short baseline neutrino anomaly with MicroBooNE experiment

Majority of experimental data involving neutrino oscillations can be explained by oscillations between 3 Standard Model neutrinos. However, over last few decades several anomalies have been observed that call for new physics. The LSND experiment observed an excess of electron anti-neutrinos in a muon anti-neutrino beam. The MiniBooNE experiment observed anomalous excesses with both neutrino and anti-neutrino data. The Gallium and reactor anomalies point to deficit of electron neutrino and anti-neutrino events respectively. Intriguing explanation of these anomalies is the existence of light sterile neutrinos. I will review the experimental evidence and discuss how MicroBooNE experiment will probe the physics behind these anomalies.