

Search for a sub-GeV Higgs portal scalar decaying to dileptons in MicroBooNE

Thursday 10 November 2022 17:00 (15 minutes)

The MicroBooNE detector is a 60 m³ active volume liquid argon time projection chamber located at Fermilab approximately 100 m from a high intensity stopped kaon source. We use this setup to search for a light, long-lived scalar boson that mixes with the Higgs boson and could be produced in rare kaon decays. We present results of our search for different dilepton signatures of these scalar boson decays, and set world-leading direct limits on the Higgs–scalar mixing angle for scalar boson masses below 275 MeV.

Type of talk

Experimental measurements

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