

Abstract Submitted
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The Barium tagging system used at the EXO Enriched Xenon Observatory for Double Beta Decay research AXEL REIMER MUELLER, Stanford University, EXO COLLABORATION — One of the most interesting question in Neutrino Physics is that of the absolute scale of the neutrino mass. Neutrinoless Double Beta Decay provides an avenue for probing Majorana Neutrino masses below 10meV. The EXO experiment aims to detect Neutrinoless Double Beta Decay in Xenon-136, and to use ion trapping and laser spectroscopy techniques to tag the barium daughter of the double beta decay for the purpose of background elimination. This talk will be focused on ion extraction probe research, and the construction and use of a 70cm linear RF ion trap for the purpose of single ion fluorescence detection in a buffer gas environment.

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