Abstract Submitted
for the APR20 Meeting of
The American Physical Society

**Radon Daughters Attachment to Teflon and Copper Surfaces** OMAR NUSAIR, The University of Alabama, NEXO COLLABORATION — nEXO is a planned ~5000 kg neutrinoless double beta decay experiment. It will utilize a single-phase liquid xenon time projection chamber (TPC) with isotopically enriched $^{136}$Xe. In order to achieve the half-life sensitivity target of $10^{28}$ years, extremely low backgrounds are required. The ($\alpha$, n) reaction on light-Z detector materials is identified as a source of internal background in nEXO. Material surface exposure to ambient air during the fabrication and transportation phases can accumulate $^{210}$Pb and $^{210}$Po, which in turn will lead to neutron-induced background. This results in stringent requirements on the allowable air exposure. This talk will present an ongoing study of the attachment of radon daughters to Teflon and copper surfaces. Attachment rates of $^{210}$Pb obtained by low-background alpha-spectrometry of $^{218}$Po and $^{214}$Po will be presented.

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Date submitted: 10 Jan 2020 Electronic form version 1.4