Contribution ID: **236** Type: **Contributed talk**

LZ Backgrounds and Mitigation

Tuesday, 25 July 2017 16:15 (15 minutes)

LZ will be a 10 ton dual-phase xenon Time Projection Chamber (TPC) searching for WIMP dark matter via direct detection. In order to achieve our desired sensitivity, we require an extremely radiopure environment. Gamma backgrounds originate outside of the bulk xenon and are mitigated by xenon's self-shielding properties, as well as our position reconstruction and veto capabilities. More challenging are Kr-85 and Rn-222 because they are dissolved throughout the active region. This talk will comprehensively address our plans to reduce and mitigate backgrounds throughout construction, operation, and analysis.

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Session Classification: Dark Matter

Track Classification: Dark Matter