

Deeper Talks: Mining for WIMPs with the LUX-ZEPLIN (LZ) dark matter experiment (Series 5)



Contribution ID: 1

Type: **not specified**

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Wednesday, October 9, 2024 10:00 AM (50 minutes)

Dark matter is known to make up ~ 85% of the mass of our universe, influencing the structure of the cosmos and the motions of galaxies through its gravitational effects. Despite an abundance of evidence for its existence, the exact nature of dark matter remains a mystery. Could it be a new particle, waiting to be discovered? Operating a mile underground in the Davis Cavern at SURF, the LZ experiment is seeking to directly observe dark matter particle interactions using a 7 tonne liquid xenon target. LZ's primary goal is to detect Weakly Interacting Massive Particles (WIMPs), a leading candidate for dark matter. During this talk, I will give an overview of the LZ experiment and report on our latest results: the most sensitive direct search for WIMPs to-date, using a combined 280 live days of data.