

# Workshop on Xenon Detector $0\nu\beta\beta$ Searches: Steps Towards the Kilotonne Scale

Contribution ID: 14

Type: **Invited talk**

## Novel caverns and underground space scaling for giant gas TPCs

*Wednesday, 25 October 2023 14:15 (25 minutes)*

The natural gas industry has technologies for large-scale cryogenic gas storage on the surface (well-known to physicists since its adoption by DUNE). Less well known are the technologies for large-scale ambient-temperature underground gas storage. In this talk I will try to convince you that, with the right underground infrastructure, gas TPCs (a) can be scaled up as easily as cryogenic liquid TPCs and (b) leave room for novel gas mixes and readout strategies which my group is exploring.

**Primary author:** MONREAL, Benjamin (Case Western Reserve University)

**Presenter:** MONREAL, Benjamin (Case Western Reserve University)

**Session Classification:** Challenges of a program towards the kton scale