

# LiquidO: Neutrino Detection and Imaging in Opaque Media

*Thursday 18 July 2024 08:30 (17 minutes)*

We shall introduce the novel LiquidO technology, relying for the first time on light detection in “opaque” media. This way, LiquidO enables sub-atomic particle event-wise imaging, so event topology, which, once combined with fast timing, the combined system enables powerful particle-ID even at MeV energies. The development is led by the homonymous international academic collaboration with institutions from over 11 countries. LiquidO appears capable of offering several detection features that might lead to a breakthrough potential in neutrino, rare decay physics and generally high-energy physics. The performance of LiquidO betters with higher energies, starting from a fraction of MeV, if scintillation is used. Its preliminary physics potential will also be highlighted. LiquidO opens a test-bed context for further detection R&D, where further innovation is ongoing, including pioneering new technology elements such as opaque scintillators.

## Alternate track

1. Neutrino Physics

## I read the instructions above

Yes

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