



Contribution ID: 979

Type: **Poster Presentation**

## ARIADNE, a Photographic Two-Phase LAr TPC

ARIADNE is an ERC funded novel and innovative 1-ton two-phase LAr TPC experiment investigating photographic imaging as an attractive alternative readout method to charge readout that is currently planned for future giant two phase LAr neutrino experiments. Advantages over current readout techniques include reduction or elimination of charge read-out channels as well as ease of scalability, upgrade, installation and maintenance. This technology has already been demonstrated at the Liverpool LAr facility with the photographic imaging of the secondary scintillation light produced in THGEM holes induced by cosmic muon tracks and single gamma interactions using a 40-litre prototype. Results will be presented that demonstrate imaging and linear track reconstruction of cosmic rays using an EMCCD camera. An overview and status of the project will be detailed. ARIADNE will mature and validate photographic readout technology and will be fully characterized at a charged particle beam line at CERN.

More details of the ARIADNE project can be found at:

<http://hep.ph.liv.ac.uk/ariadne/>

### Experimental Collaboration

ARIADNE

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**Session Classification:** Poster session

**Track Classification:** Detector R&D and Data Handling