10th Symposium on Large TPCs for low-energy rare event detection

Report of Contributions

Contribution ID: **2**　　　　　　　　　　　　　　　Type: **not specified**

Opening

Session Classification: Wednesday Morning

Contribution ID: **3** Type: **not specified**

Special Invited Talk

Session Classification: Wednesday Morning

Contribution ID: **4**

Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **5**

Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **6**   Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **7**

Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **8**   Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **9**   Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **10**

Type: **not specified**

Special Invited Talk

Session Classification: Wednesday Afternoon

Contribution ID: **11**   Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **12**　　　　　　　　　　　　　　　Type: **not specified**

Talk

Session Classification:　Wednesday Afternoon

Contribution ID: **13**   Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **14**
Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **15**
Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **16**

Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: 17 Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **18** Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: **19**   Type: **not specified**

Special Invited Talk

Session Classification: Thursay Morning

Contribution ID: **20**

Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **21**   Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **22**

Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **23**

Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **24**   Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **25**   Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **26**   Type: **not specified**

Special Invited Talk

Session Classification: Thursday Afternoon

Contribution ID: **27**   Type: **not specified**

Talk

Session Classification: Thursday Afternoon

Contribution ID: **28**   Type: **not specified**

Talk

Session Classification: Thursday Afternoon

Contribution ID: **29**   Type: **not specified**

Organizational Announcement

Information about the Dinner.

Session Classification: Thursday Afternoon

Contribution ID: **30**   Type: **not specified**

Special Invited Talk

Session Classification: Friday Morning

Contribution ID: **31** Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **32**   Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **33** Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **34** Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **35**
Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **36**

Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **37**
Type: **not specified**

Special invited Talk

Session Classification: Friday Afternoon

Contribution ID: **38**   Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **39** Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **40**   Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **41**

Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **42**

Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **43**

Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **44**   Type: **not specified**

Conference Closing

Session Classification: Friday Afternoon

Contribution ID: 45   Type: **not specified**

Talk

Session Classification: Wednesday Morning

Contribution ID: **46**

Type: **not specified**

Talk

Session Classification: Wednesday Afternoon

Contribution ID: 47

Type: **not specified**

Talk

Session Classification: Thursay Morning

Contribution ID: **48**

Type: **not specified**

Talk

Session Classification: Thursday Afternoon

Contribution ID: **49**

Type: **not specified**

Talk

Session Classification: Friday Morning

Contribution ID: **50**

Type: **not specified**

Talk

Session Classification: Friday Afternoon

Contribution ID: **51**   Type: **not specified**

Anniversary Session

Friday 17 December 2021 14:00 (1 minute)

Contribution ID: **52** Type: **not specified**

Opening

Friday 17 December 2021 14:01 (29 minutes)

Presenter: Dr GIOMATARIS, Ioanis (Université Paris-Saclay (FR))

Contribution ID: **53**   Type: **not specified**

Conception, Gestation, and Birth of the TPC Idea

Friday 17 December 2021 14:30 (40 minutes)

Presenter: NYGREN, David

Contribution ID: **54**　　　　　　　　　　　　　　　　Type: **not specified**

Neutrinos, the messengers of the invisible world

Friday 17 December 2021 15:10 (40 minutes)

Presenter:　VANNUCCI, Francois (Centre National de la Recherche Scientifique (FR))

Contribution ID: **55** Type: **not specified**

Standard model and prospects

Friday 17 December 2021 15:50 (40 minutes)

Presenter: ILIOPOULOS, Jean (ENS)

Contribution ID: **56**　　　　　　　　　　　　　　　　Type: **not specified**

Neutrino mass spectrum and PMNS mixing: A Review

Friday 17 December 2021 10:00 (45 minutes)

Presenter:　LISI, Eligio

Contribution ID: **57**   Type: **not specified**

Precise timing with PICOSEC Micromegas

Friday 17 December 2021 11:45 (30 minutes)

Presenter: BRUNBAUER, Florian Maximilian (CERN)

Contribution ID: **58**　　　　　　　　　　　　　　　　Type: **not specified**

Resistive Detectors with DLC

Friday 17 December 2021 11:15 (30 minutes)

Presenter:　ZHOU, Yi (University of Science and Technology of China (CN))

Contribution ID: **59**   Type: **not specified**

Review on Axions

Wednesday 15 December 2021 10:15 (45 minutes)

Presenter: GIANNOTTI, Maurizio

Contribution ID: **60**　　　　　　　　　　　　　　　　　　　　Type: **not specified**

BabyIAXO axion experiment

Wednesday 15 December 2021 11:00 (30 minutes)

Presenter:　GARCIA IRASTORZA, Igor (Universidad de Zaragoza (ES))

Contribution ID: **61**　　　　　　　　　　　　　　　　Type: **not specified**

Review on Dark Matter

Wednesday 15 December 2021 14:00 (45 minutes)

Presenter:　CEBRIAN, Susana (Universidad de Zaragoza)

Contribution ID: **62**　　　　　　　　　　　　　　　　Type: **not specified**

R2D2: an R&D program for the search of neutrino-less double beta decay

Friday 17 December 2021 10:45 (30 minutes)

Presenter: LAUTRIDOU, Pascal (SUBATECH)

Contribution ID: **63**   Type: **not specified**

Review on neutrino properties and supernovae

Thursday 16 December 2021 10:00 (45 minutes)

Presenter: VOLPE, Cristina (APC)

Contribution ID: **64**   Type: **not specified**

Latest results from KATRIN

Thursday 16 December 2021 11:15 (30 minutes)

Presenter: HOUDY, Thibaut (Université Paris-Saclay (FR))

Contribution ID: **65** Type: **not specified**

Welcome

Wednesday 15 December 2021 10:00 (14 minutes)

Contribution ID: **66**   Type: **not specified**

Cosmological constraints on neutrino masses and couplings

Thursday 16 December 2021 10:45 (30 minutes)

Presenter: LESGOURGUES, Julien (TTK, RWTH Aachen University)

Contribution ID: **67**   Type: **not specified**

Review on Dark Matter

Contribution ID: **68** Type: **not specified**

T2K experiment results and upgrades

Thursday 16 December 2021 14:30 (30 minutes)

Presenter: ZITO, Marco (Université Paris-Saclay (FR))

Contribution ID: **69** Type: **not specified**

CERN Neutrino Platform and the ProtoDUNEs detectors

Thursday 16 December 2021 16:00 (30 minutes)

Presenter: RESNATI, Filippo (CERN)

Contribution ID: **70**   Type: **not specified**

The Dune project

Thursday 16 December 2021 15:30 (30 minutes)

Presenter: PEETERS, Simon (University of Sussex (GB))

Contribution ID: **71**   Type: **not specified**

High pressure TPC for DUNE near detector

Thursday 16 December 2021 16:30 (30 minutes)

Presenter: GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela (ES))

Contribution ID: **72**　　　　　Type: **not specified**

Group pictures (live and remote)

Thursday 16 December 2021 15:00 (15 minutes)

Presenter: PAGES, Samuel

Contribution ID: **73**   Type: **not specified**

Self-interacting asymmetric dark matter

Wednesday 15 December 2021 16:30 (30 minutes)

Presenter: PETRAKI, Kallia (LPTHE, Sorbonne University)

Contribution ID: **74**   Type: **not specified**

Latest progress of the PandaX-III double-beta decay experiment

Thursday 16 December 2021 11:45 (30 minutes)

Presenters: LIN, Heng (Shanghai JiaoTong University);   HAN, Ke (Shanghai Jiao Tong University)

Contribution ID: **75**   Type: **not specified**

Overview of Noble Liquid TPCs for Dark Matter search

Wednesday 15 December 2021 15:30 (30 minutes)

Presenter: GAO, Fei (Columbia University)

Contribution ID: **76**

Type: **not specified**

DarkSide-20k: Direct Dark Matter detection experiment with liquid argon TPC

Wednesday 15 December 2021 16:00 (30 minutes)

Presenter: WADA, Masayuki

Contribution ID: **78**   Type: **not specified**

Overview of the DUNE experiment

The Deep Underground Neutrino Experiment (DUNE) will consist of a 40-ktonne liquid argon TPC detector situated 1.5 km below the surface at the Sanford Underground Research Facility. A new broadband high-intensity neutrino source and Near Detector complex will be located at Fermilab, at a distance of 1,300 kilometres. This arrangement will provide excellent sensitivity in the search for neutrino CP violation, determination of the neutrino mass ordering, and for precision measurements of neutrino mixing parameters. The underground Far Detector also allows for low background, low threshold observations of supernova neutrinos, with a unique sensitivity to the electron neutrino flux. Furthermore, DUNE will conduct a wide range of searches for physics beyond the Standard Model, including baryon number violation, rare scattering processes, and non-standard flavour transitions. In this talk, I will review give an overview of the DUNE experiment and its extensive physics program.

Primary author: PEETERS, Simon (University of Sussex (GB))

Presenter: PEETERS, Simon (University of Sussex (GB))

Session Classification: Wednesday Afternoon

Contribution ID: **79**   Type: **not specified**

Latest news from the NewsG experiment

Wednesday 15 December 2021 14:45 (30 minutes)

Presenter: NIKOLOPOULOS, Konstantinos (University of Birmingham (GB))

Contribution ID: **80** Type: **not specified**

Latest results and prospects on gravitational waves

Wednesday 15 December 2021 11:30 (30 minutes)

Presenter: ROBINET, Florent (IJCLab - Orsay)

Contribution ID: **81**   Type: **not specified**

Towards Directional Dark Matter Detectors using High Gain Negative Ion TPCs with Continuous Radon Reduction

Wednesday 15 December 2021 12:00 (30 minutes)

Presenters: MCLEAN, Alasdair (University of Sheffield); MARCELO GREGORIO, Robert Renz (University of Sheffield)

Contribution ID: **82**   Type: **not specified**

Towards Directional Dark Matter Detectors using High Gain Negative Ion TPCs with Continuous Radon Reduction and RTP Operation

In the context of CYGNUS consortium R&D work towards large scale direction sensitive detectors for dark matter and nucleus-neutrino coherent scattering experiments, we present gain and functionality results on the use of new high gain MM-ThGEM charge amplification devices with negative ion SF_6, CF_4 and SF_6:CF_4:He mixtures towards atmospheric pressure. The device is designed for operation with micromegas or other 2D charge readout planes. Results show stable operation with high gains in various mixtures including low pressure operation. In addition a new molecular sieve-based gas recycling system is presented that provides for simultaneous removal of both radon and common impurities from SF_6:CF_4:He gases in TPCs, hence minimising the total amount of gas required. Removal of internally-produced radon and associated progeny is important for background suppression whilst removal of outgassing and leaked-in contaminants such as water, oxygen and nitrogen is required to suppress capture of interaction-produced electrons which causes gain suppression. The system utilises a Vacuum Swing Adsorption (VSA) technique, allowing continuous long-term operation. Studies are presented of a new low radioactive molecular sieve, developed for this work and found to emanate radon up to 98% less per radon captured than commercial material.

Primary authors: Mr MCLEAN, Alasdair (University of Sheffield); MIUCHI, Kentaro (Kobe University); SPOONER, Neil (University of Sheffield); Mr MARCELO GREGORIO, Robert Renz (University of Sheffield); Dr OGAWA, Hiroshi (CST Nihon University)

Presenters: Mr MCLEAN, Alasdair (University of Sheffield); Mr MARCELO GREGORIO, Robert Renz (University of Sheffield)

Session Classification: Wednesday Morning

Contribution ID: **83** Type: **not specified**

NEXT: NEXT-White results and roadmap towards a ton-scale detector

Thursday 16 December 2021 14:00 (30 minutes)

Presenter: NOVELLA GARIJO, Pau (Univ. of Valencia and CSIC (ES))