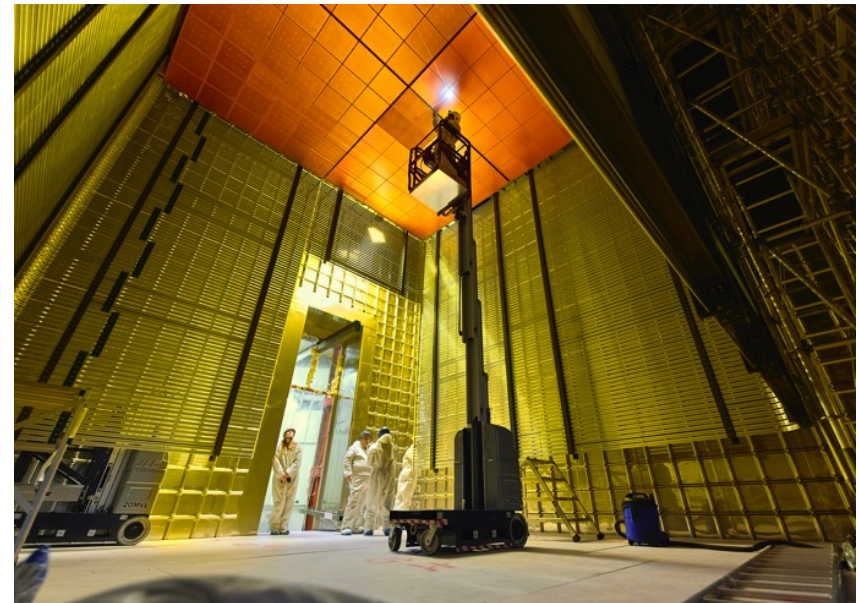
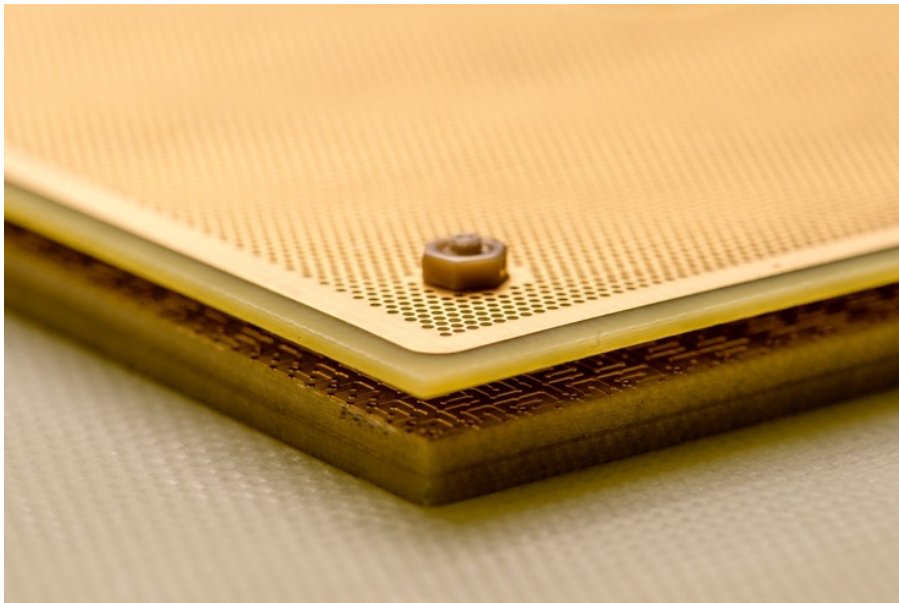




Workshop on the LEM/Thick GEM cryogenic utilization in pure Argon over large detection surfaces

Zoom videoconference, 6-7th april, 2020





Goal of the workshop



■ Promote exchanges and discussions to understand how to make further progress on the R&D on LEM/THGEM and on the dual-phase TPC technology :

- ✓ charge amplification in noble ultra pure gas such as Argon
- ✓ covering large scale (tens of m²) readout surfaces with LEMs

■ 3 half day sessions :

- ✓ Experience from protoDUNE-DP, production means, simulations
- ✓ R&D on LEMs, discussion on protoDUNE-DP phase II
- ✓ Integration of LEMs on large readout surfaces

Workshop on the LEM/Thick GEM cryogenic utilization in pure Argon over large detection surfaces

chaired by Alain Delbart (Irfu), Dario Autiero (IPNL), Dominique Duchesneau (LAPP, CNRS-IN2P3), Filippo Resnati (CERN)

from Monday, April 6, 2020 at **08:00** to Tuesday, April 7, 2020 at **18:00** (Europe/Paris)

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Monday, April 6, 2020

<https://indico.fnal.gov/event/23774/>

09:00 - 12:00

Experience from protoDUNE-DP, production means, simulations

Convener: Dario Autiero (IPNL)

Material:

Instructions for videoconference connection



09:00 **Introduction 10'**

Speaker: Dr. Alain Delbart (Irfu)

09:10 **LEM for protoDUNE-DP, design, QA/QC and tests 30'**

Speaker: Dr. Edoardo Mazzucato (CEA Saclay)

09:40 **Experience with LEMs in protoDUNE-DP 30'**

Speaker: Guillaume Eurin (CEA/IRFU)

10:10 **Break 15'**

10:25 **THGEM Production (including new processes and new ideas) 30'**

Speaker: Rui De Oliveira (CERN)

10:55 **THGEM simulations 30'**

Speaker: Pedro Correia (University of Aveiro)

11:25 **Discussion on LEMs performance in protoDUNE-DP 30'**

Speaker: Dr. Alain Delbart (Irfu)

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14:00 - 18:20

R&D on LEM/Thick GEM, discussion on protoDUNE-DP phase II

Convener: Filippo Resnati (CERN)

Material: [Instructions for videoconference connection](#) 

14:00 **THGEM Experience at Weizmann 30'**

Speaker: Shikma Bressler (Weizmann Institute of Science)

14:30 **THGEM Experience with COMPASS 30'**

Speaker: Dr. Silvia Dalla Torre (INFN Trieste)

15:00 **Glass Thick GEM 30'**

Speaker: Takeshi Fujiwara (National Institute of Advanced Industrial Science and Technology (AIST), JAPAN)

15:30 **Micro-RWELL 30'**

Speaker: Giovanni Bencivenni (INFN INFN-LNF (LABORATORI NAZIONALI DI FRASCATI))

16:00 **Break 15'**

16:15 **Charge and light signal amplification in two-phase detectors 30'**

Speaker: Alexey Buzulutskov (Budker Institute of Nuclear Physics of Siberian Branch Russian Academy of Sciences (BINP SB RAS))

16:45 **Multilayer THGEM 30'**

Speaker: Dr. Marco Cortesi (National Superconducting Cyclotron Laboratory (Michigan State University))

17:15 **R&D on LEM improvements for phase II of ProtoDUNE-DP 30'**

Speaker: Dr. Alain Delbart (Irfu)

17:45 **Discussion on LEM design for phase II of protoDUNE-DP 30'**

Speaker: Dr. Alain Delbart (Irfu)

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Tuesday, April 7, 2020

<https://indico.fnal.gov/event/23774/>

14:00 - 18:00

Integration of LEM/Thick GEM on large readout surfaces

Convener: Filippo Resnati (CERN)

Material:

Instructions for videoconference connection



14:00 **Design of protoDUNE-DP Charge Readout Planes 30'**

Speaker: Mr. Benjamin AIMARD (LAPP)

14:30 **Experience with Charge Readout Planes in protoDUNE-DP operation 30'**

Speaker: Dominique Duchesneau (LAPP, CNRS-IN2P3)

15:00 **Break 15'**

15:15 **Electrostatic aspects: charging up effects of dielectrics 20'**

Speaker: Bo Yu (Brookhaven National Lab)

15:35 **Foreseen CRP improvements for phase II of protoDUNE-DP 30'**

Speaker: Mr. Benjamin AIMARD (LAPP)

16:05 **Discussion on Charge Readout Planes improvements 30'**

Speaker: Dominique Duchesneau (LAPP, CNRS-IN2P3)



Practical organization



■ Please be prepared to give the talks without using the screen sharing in case of zoom bandwidth limitations :

- ✓ for speakers : announcing the slide number you present
- ✓ for participants : download talks from indico

■ Talks are meant to be “lively” instead of formal reporting

- ✓ Discussions happening during the presentations are welcome
- ✓ Feel free to ask questions, make comments, propose new ideas and launch brainstormings
- ✓ 30' are reserved at the end of the 3 sessions for more discussions

Thanks again for your participation !