DRD1 Collaboration meeting in Warsaw

Report of Contributions

https://events.camk.edu.pl/e/drd1-2025

Contribution ID: **1** Type: **not specified**

Update on AIDA proposal

Wednesday 8 October 2025 11:00 (15 minutes)

Presenter: VERWILLIGEN, Piet (INFN Bari)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

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

Summer student project Djunes/Tom

Wednesday 8 October 2025 11:15 (15 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

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

the word from RD51/DRD1 Management

Wednesday 8 October 2025 09:00 (10 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

Contribution ID: **4** Type: **not specified**

Archana Sharma (online)

Wednesday 8 October 2025 09:10 (10 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

Contribution ID: **5** Type: **not specified**

Heinrich Schindler

Wednesday 8 October 2025 09:20 (10 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

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

Rob / Djunes

Wednesday 8 October 2025 09:30 (30 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

Contribution ID: **7** Type: **Regular plenary talk**

Picosec : Photocathode studies and multichannel analysis

Monday 6 October 2025 14:25 (25 minutes)

Co-author: GUERRA, Francesco

Presenters: GUERRA, Francesco; LISOWSKA, Marta (CERN)

Session Classification: Working Group 1: Technological Aspects and Developments of New Detector Structures, Common Characterization and Physics Issues

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

Steve's last years

Wednesday 8 October 2025 10:00 (30 minutes)

Presenter: METTING VAN RIJN, Marnik (ETH Zurich | High Voltage Laboratory)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

Contribution ID: **9** Type: **Regular plenary talk**

Field-Assisted Transparent Gaseous Electroluminescence Multipliers - Updates

Monday 6 October 2025 14:50 (25 minutes)

Co-author: RODAS, Diego

Presenters: CORTEZ, André (CAMK PAN); RODAS, Diego

Session Classification: Working Group 1: Technological Aspects and Developments of New Detector Structures, Common Characterization and Physics Issues

Contribution ID: **10** Type: **Regular plenary talk**

Beam monitoring with an optically read out GEM-based detector

Monday 6 October 2025 15:15 (25 minutes)

Presenter: LAZEK, Lukas (ETH Zurich)

Session Classification: Working Group 1: Technological Aspects and Developments of New Detector Structures, Common Characterization and Physics Issues

Contribution ID: **11** Type: **Regular plenary talk**

New extremely light straw tube detector with a non-woven graphite-textile

Monday 6 October 2025 14:00 (25 minutes)

Presenter: NISHIGUCHI, Hajime (KEK)

Session Classification: Working Group 1: Technological Aspects and Developments of New Detector Structures, Common Characterization and Physics Issues

Contribution ID: **12** Type: **Regular plenary talk**

THGEM with resistive plate anode: Signal shape and gain optimization

Monday 6 October 2025 15:40 (25 minutes)

Presenter: MAITY, Arpan (Weizman Institute)

Session Classification: Working Group 1: Technological Aspects and Developments of New Detector Structures, Common Characterization and Physics Issues

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

Capacitive sharing

Wednesday 8 October 2025 11:30 (20 minutes)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

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

A modelisation of the response of a gaseous TPC optically readout

Wednesday 8 October 2025 11:50 (20 minutes)

The CYGNO collaboration is developing a gaseous time projection chamber with optical readout of a triple-GEM stack for directional dark matter searches. While this technique provides detailed reconstruction of event topology, it requires operation at high gain of the amplification stage, where nonlinearities in the GEM response become significant. We present a model developed to describe these nonlinear effects and compare the simulated results with experimental data

Presenter: PINCI, Davide (INFN - Roma)

Session Classification: Working Group 4: Detector physics, simulations, and software tools

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

Welcome

Tuesday 7 October 2025 14:00 (10 minutes)

Co-authors: PASTORE, Alessandra (INFN Bari); MANDELLI, Beatrice; RENGA, Francesco; MORELLO, Gianfranco; ROTH, Stefan

Presenters: PASTORE, Alessandra (INFN Bari); MANDELLI, Beatrice; RENGA, Francesco; MORELLO, Gianfranco; ROTH, Stefan

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **16** Type: **Regular plenary talk**

Impact of trace amounts of water on the stability of MPGDs

Tuesday 7 October 2025 14:10 (25 minutes)

Author: GASIK, Piotr (GSI/FAIR and Tu Darmstadt)

Presenter: GASIK, Piotr (GSI/FAIR and Tu Darmstadt)

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **17** Type: **Regular plenary talk**

Oxygen and isopropyl alcohol as additives in drift chamber gas mixtures

Tuesday 7 October 2025 14:35 (25 minutes)

Author: RENGA, Francesco

Presenter: RENGA, Francesco

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **18** Type: **Regular plenary talk**

TBD

Tuesday 7 October 2025 15:00 (25 minutes)

Author: RIGOLETTI, Gianluca

Co-author: SALOMON, Ori

Presenters: RIGOLETTI, Gianluca; SALOMON, Ori

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **19** Type: **Regular plenary talk**

TBD

Tuesday 7 October 2025 15:25 (25 minutes)

Author: SANTOS, Filomena (LIP)

Presenter: SANTOS, Filomena (LIP)

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **20** Type: **Regular plenary talk**

Timing performance of Picosec Micromegas with environmental-friendly gas mixtures

Tuesday 7 October 2025 16:30 (25 minutes)

Authors: VAI, Ilaria; BRUNOLDI, Matteo

Presenters: VAI, Ilaria; BRUNOLDI, Matteo

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **21** Type: **Regular plenary talk**

Unveiling Surface Chemistry and Ageing Pathways of GEMs through > In-Situ Surface Spectroscopy

Tuesday 7 October 2025 16:55 (25 minutes)

Author: DA SILVA, Tiago Fiorini

Presenter: DA SILVA, Tiago Fiorini

Session Classification: Working Group 3: Gas and material studies

Contribution ID: **22** Type: **not specified**

The modeling of rate effects in RPCs

Wednesday 8 October 2025 12:10 (20 minutes)

Abstract:This work introduces Markov modelling to describe how resistive plate chambers (RPC) deteriorate under uniform background irradiation. The model works for high irradiation rates and arbitrary charge spectra. Applied to M. Abbrescia's single-cell RPC model (RC circuit), it agrees with Monte Carlo simulations and can also describe RPCs with polarizable resistive layers and in two dimensions. Including streamer-like events (large charge) allows the model to match experimental efficiency curves, showing that these events cause the reduction of the efficiency plateau at high irradiation rates. For eco-friendly gas mixtures, this means suppressing streamers is key for reaching high-rate capability.

Presenter: STOCCO, Dario (ETH Zürich)

Session Classification: Working Group 4: Detector physics, simulations, and software tools