

RD51 Collaboration Meeting and Lectures

Report of Contributions

Contribution ID: 1

Type: **not specified**

The Upgrade of the ALICE TPC

Tuesday 23 June 2020 09:40 (20 minutes)

Summary

Presenter: MUNZER, Robert Helmut (Goethe University Frankfurt (DE))

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 2

Type: **not specified**

Ways of development of the MPGD methodology

Tuesday 23 June 2020 09:20 (20 minutes)

Summary

Presenter: RAZIN, Vladimir (Institute for Nuclear Research (INR)-Russian Academy of Sciences)

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 3

Type: **not specified**

Status of NSW Micromegas production

Tuesday 23 June 2020 10:40 (20 minutes)

Summary

Presenter: ANTONELLI, Mario (INFN e Laboratori Nazionali di Frascati (IT))

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 4

Type: **not specified**

Update on GE11 construction and commissioning

Tuesday 23 June 2020 10:00 (20 minutes)

Summary

Presenter: SIMONE, Federica Maria (Universita e INFN, Bari (IT))

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 5

Type: **not specified**

Studies of non-linearity in the response of an Optical Readout GEM-TPC

Wednesday 24 June 2020 11:50 (20 minutes)

Summary

Presenter: RENGA, Francesco (INFN Roma)

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 6

Type: **not specified**

The CYGNO project: performance and stability of Optical Readout GEM-TPC

Wednesday 24 June 2020 11:30 (20 minutes)

Summary

Presenter: PINCI, Davide (Sapienza Universita e INFN, Roma I (IT))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 7

Type: **not specified**

GEM foil optimization for GE21 and ME0 (rate capability issues, HV filtering optimization)

Wednesday 24 June 2020 10:30 (20 minutes)

Presenter: FALLAVOLLITA, Francesco (Università e INFN Pavia)

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 8

Type: **not specified**

GEM stack optimization for GE21 and ME0 (cross-talk studies, discharge mitigation)

Wednesday 24 June 2020 10:10 (20 minutes)

Presenter: Dr MERLIN, Jeremie Alexandre (INFN-Bari)

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 9

Type: **not specified**

Development of a Simulation Framework for Spherical Proportional Counters

Thursday 25 June 2020 09:05 (35 minutes)

Summary

Presenters: NIKOLOPOULOS, Konstantinos (University of Birmingham (GB)); WARD, Robert James; WARD, Robert James (University of Birmingham (GB))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: **10**

Type: **not specified**

Common mode and ion tail studies in the ALICE TPC

Presenters: ARSLANDOK, Mesut (Ruprecht Karls Universitaet Heidelberg (DE)); CHATZIDAKI, Panagiota (Ruprecht Karls Universitaet Heidelberg (DE))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: **11**

Type: **not specified**

Charge sharing in single and double GEMs

Thursday 25 June 2020 09:40 (20 minutes)

Presenters: ROY, Promita (Saha Institute Of Nuclear Physics); MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN)); MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: **12**

Type: **not specified**

C++ Interface of neBEM in Garfield++

Thursday 25 June 2020 10:40 (20 minutes)

Presenters: SCHINDLER, Heinrich (CERN); MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN)); MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: 15

Type: **not specified**

Discharge and charge density limits for THGEMs: measurements and simulations

Presenter: LAUTNER, Lukas (Technische Universitaet Muenchen (DE))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: **16**

Type: **not specified**

Spectroscopy studies with different GEM materials

Presenters: ULUKUTLU, Berkin (Technische Universität München); Mr ULUKUTLU, Berkin (Technische Universitaet Muenchen (DE))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 17

Type: **not specified**

Introduction to xenon-based detectors

Monday 22 June 2020 15:15 (45 minutes)

Presenter: ROGERS, Leslie (University of Texas at Arlington)

Session Classification: RD51 Lectures

Contribution ID: **18**

Type: **not specified**

Introduction to the PAI model

Tuesday 23 June 2020 16:15 (45 minutes)

Presenter: SMIRNOV, Igor (NRC Kurchatov Institute PNPI (RU))

Session Classification: RD51 Lectures

Contribution ID: **19**

Type: **not specified**

Boundary element method

Tuesday 23 June 2020 15:15 (45 minutes)

Presenter: MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN))

Session Classification: RD51 Lectures

Contribution ID: 20

Type: **not specified**

Hands-on Open Source finite elements

Wednesday 24 June 2020 15:00 (2 hours)

Presenters: RENNER, Josh (Univ. of Valencia and CSIC (ES)); RENNER, Joshua (UC Berkeley / Lawrence Berkeley National Lab)

Session Classification: RD51 Lectures

Contribution ID: 21

Type: **not specified**

Charging-up simulations for GEM and Micromegas

Thursday 25 June 2020 14:00 (45 minutes)

Presenter: CORREIA, Pedro (University of Aveiro)

Session Classification: RD51 Lectures

Contribution ID: 22

Type: **not specified**

Which ions are producing the signals ?:

Thursday 25 June 2020 15:00 (45 minutes)

Summary

Presenter: VEENHOF, Rob (Uludag University (TR))

Session Classification: RD51 Lectures

Contribution ID: 23

Type: **not specified**

Introduction to FPGA

Session Classification: RD51 Lectures

Contribution ID: 24

Type: **not specified**

Read-out electronics

Friday 26 June 2020 14:00 (1 hour)

Presenter: POPESCU, Sorina (The University of Kansas (US))

Session Classification: RD51 Lectures

Contribution ID: 25

Type: **not specified**

Penning effect

Thursday 25 June 2020 16:00 (30 minutes)

Presenter: SAHIN, Ozkan (Uludag University)

Session Classification: RD51 Lectures

Contribution ID: 26

Type: **not specified**

micro-RWELL application to thermal neutron detection

Thursday 25 June 2020 10:00 (20 minutes)

Presenter: LAVEZZI, Lia (Universita e INFN Torino (IT))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: 27

Type: **not specified**

DMM & TMM: the Double and Triple Micro-Mesh gaseous structures for high gain and ultra-low IBF purpose

Tuesday 23 June 2020 09:00 (20 minutes)

Presenter: ZHANG, Zhiyong (University of Science and Technology of China (CN))

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 28

Type: **not specified**

First evidence of luminescence in He:CF₄-filled CYGNO TPC induced by non-ionizing electrons

Tuesday 23 June 2020 11:00 (20 minutes)

Summary

Presenter: DHO, Giorgio

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 29

Type: **not specified**

Induction of GEM to GEM discharges by using a single hole THGEM

Wednesday 24 June 2020 09:30 (20 minutes)

Presenter: POLJAK, Nikola (University of Zagreb (HR))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: **30**

Type: **not specified**

Studies on charging-up of single Gas Electron Multiplier

Wednesday 24 June 2020 09:50 (20 minutes)

Presenter: Mr KUMAR, Vishal (Saha Institute of Nuclear Physics)

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: **31**

Type: **not specified**

Single UV-photon detection with RPWELL-based detectors

Tuesday 23 June 2020 11:20 (20 minutes)

Presenter: BHATTACHARYA, Purba (INFN, Cagliari)

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 32

Type: **not specified**

Considerations about bubble dynamics in LHM detectors

Tuesday 23 June 2020 11:40 (20 minutes)

Presenter: TESI, Andrea (Weizmann Institute of Science (IL))

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: 33

Type: **not specified**

On the space resolution of the u-RWELL

Wednesday 24 June 2020 11:10 (20 minutes)

In MPGD detectors evaluation of the space resolution with the charge centroid (CC) method provides large uncertainty when the impinging particle is not perpendicular to the readout plane. An improvement of the position reconstruction, and thus of the space resolution, is represented by the uTPC algorithm. In this work we report the application of this algorithm to the u-Resistive WELL detector. Moreover a combination of the CC method with the uTPC algorithm is proposed, showing an almost uniform resolution over a wide angular range.

Presenter: GIOVANNETTI, Matteo (INFN e Laboratori Nazionali di Frascati (IT))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 34

Type: **not specified**

Charging-up effect in Resistive Micromegas

Summary

Presenter: SAMARATI, Jerome (ESS - European Spallation Source (SE))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: 35

Type: **not specified**

The COMPASS GEM upgrade

Tuesday 23 June 2020 12:00 (20 minutes)

Presenter: FLÖTHNER, Karl (HISKP-Uni-Bonn)

Session Classification: WG1 - Technological Aspects and Development of New Detector Structures

Contribution ID: **36**

Type: **not specified**

Light measurements in the visible / NIR with a high-pressure TPC

Wednesday 24 June 2020 12:10 (20 minutes)

Presenter: CHEN-WISHART, Zachary (Royal Holloway University of London)

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 37

Type: **not specified**

Charge density limits for discharge formation in THGEM structures: measurement and simulations

Thursday 25 June 2020 11:00 (20 minutes)

Presenters: LAUTNER, Lukas (Technische Universitaet Muenchen (DE)); GASIK, Piotr (GSI - Helmholtzzentrum fur Schwerionenforschung GmbH (DE))

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: 38

Type: **not specified**

Update on Avalanche Simulations in a Triple GEM

Thursday 25 June 2020 11:20 (20 minutes)

Presenters: DUBEY, Anand Kumar (Department of Atomic Energy (IN)); BAL, Aritra (Indian Institute of Technology Kharagpur)

Session Classification: WG4 - Modelling of Physics Processes and Software Tools

Contribution ID: 39

Type: **not specified**

R&D on High-rate uRWELL and RWELL detectors

Presenters: Mr GUSONG; LYU, You (University of Science and Technology of China (CN))

Contribution ID: 40

Type: **not specified**

R&D on High-rate uRWELL and RWELL detectors

Friday 26 June 2020 09:00 (20 minutes)

Presenters: GU, Song; LYU, You (University of Science and Technology of China (CN))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 41

Type: **not specified**

Production and performance of Micromegas detectors using thermal bonding method

Friday 26 June 2020 09:20 (20 minutes)

Presenter: FENG, Jianxin (University of Science and Technology of China (CN))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 42

Type: **not specified**

Micromegas with resistive sharing for T2K upgrade

Friday 26 June 2020 11:20 (20 minutes)

Presenter: DELBART, Alain (Université Paris-Saclay (FR))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 43

Type: **not specified**

First results using a 2-D Strip-readout Micromegas detector with DLC Anode incl. Pulseshape discussion

Friday 26 June 2020 10:00 (20 minutes)

Presenter: JAGFELD, Christoph (Ludwig Maximilians Universitat (DE))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 44

Type: **not specified**

Mechanical aspects of CERN GDD 10cm x 10cm new PICOSEC detector

Friday 26 June 2020 10:40 (20 minutes)

Presenter: UTROBICIC, Antonija (CERN)

Session Classification: WG6 - Production and Industrialization

Contribution ID: 45

Type: **not specified**

WG5 / Advanced Time over Threshold method of charge measuring for time-of-flight and calorimetric applications

Friday 26 June 2020 11:00 (20 minutes)

Presenter: USENKO, Evgueni (Russian Academy of Sciences (RU))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 46

Type: **not specified**

Search for new (TH)GEM coating materials using spectroscopy methods

Friday 26 June 2020 09:40 (20 minutes)

Presenters: ULUKUTLU, Berkin (Technische Universitaet Muenchen (DE)); GASIK, Piotr (GSI - Helmholtzzentrum fur Schwerionenforschung GmbH (DE))

Session Classification: WG6 - Production and Industrialization

Contribution ID: 47

Type: **not specified**

Capacitive sharing read/out for High space resolution detectors with reduced FE electronics channels count

Friday 26 June 2020 11:40 (20 minutes)

Presenter: GNANVO, Kondo (Florida Institute of Technology, Melbourne, FL, USA)

Session Classification: WG6 - Production and Industrialization

Contribution ID: 48

Type: **not specified**

Advanced Time over Threshold method of charge measuring for time-of-flight and calorimetric applications

Monday 22 June 2020 09:00 (25 minutes)

Modified Time over Threshold (TOT) method by charge and amplitude measurements use analog sine pulse shaper. The Time-Of-Flight front-end electronics for HADES (GSI, Germany) experiment based on modified TOT method are presented. The sine pulse shaper made it possible to reduce the error of the TOT method and ensure the uniqueness of the charge spectrum. With a response threshold of 35 mV, the amplitude range of measurements reaches 20 V with an accuracy of 0.35%. New experience of using especially modified TOT FEE for RPC applications with 1mV threshold range for BM&N (JINR, Dubna, Russia) presented too. Particular attention is paid to the study of the accuracy parameters of the modified by analog sine pulse shaper TOT method.

Presenter: USENKO, Evgueni (Russian Academy of Sciences (RU))

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 49

Type: **not specified**

VMM3a hybrid firmware improvements

Monday 22 June 2020 09:25 (20 minutes)

Presenter: SCHWÄBIG, Patrick (Uni Bonn)

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 50

Type: **not specified**

VMM3a hybrid quality control test system

Monday 22 June 2020 09:45 (20 minutes)

Presenter: JAEKEL, Finn (Uni Bonn)

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 51

Type: **not specified**

VMM3a hybrid noise measurements

Monday 22 June 2020 10:05 (20 minutes)

Presenter: TERZIMPASOGLOU, Emorfili (Uni-Bonn HISKP)

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 52

Type: **not specified**

Crosstalk in double-segmented GEM foils for the CMS muon upgrade

Wednesday 24 June 2020 14:00 (20 minutes)

Summary

Presenter: BUTALLA, Stephen (Florida Institute of Technology (US))

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 53

Type: **not specified**

Measurements with the Dual-Polarity Ion Drift Chamber (DP-IDC)

Wednesday 24 June 2020 14:20 (20 minutes)

Presenter: MARQUES, David

Session Classification: WG2 - Detector Physics and Performance

Contribution ID: 54

Type: **not specified**

Summary on WG5.1 meetings

Monday 22 June 2020 10:40 (20 minutes)

Presenter: SCHARENBERG, Lucian (CERN, University of Bonn (DE))

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 55

Type: **not specified**

Test demo VMM hybrids with VTC

Presenters: HRACEK, Marek (Czech Technical University (CZ)); POPESCU, Sorina (The University of Kansas (US))

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 56

Type: **not specified**

VTC test - hardware demo

Monday 22 June 2020 11:00 (10 minutes)

Presenter: HRACEK, Marek (Czech Technical University (CZ))

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 57

Type: **not specified**

VTC test - software demo

Monday 22 June 2020 11:10 (15 minutes)

Presenters: POPESCU, Sorina (F); POPESCU, Sorina (The University of Kansas (US))

Session Classification: WG5 - Electronics for MPGD

Contribution ID: 58

Type: **not specified**

News from Collaboration Board

Wednesday 24 June 2020 09:00 (10 minutes)

Presenters: OCHI, Atsuhiko (Kobe University (JP)); TSIPOLITIS, Yorgos (NTUA); TSIPOLITIS, Yorgos (National Technical Univ. of Athens (GR))

Session Classification: Communications

Contribution ID: 59

Type: **not specified**

Snowmass 2021: Instrumentation Frontier & MPGD

Wednesday 24 June 2020 09:10 (10 minutes)

Presenter: TITOV, Maxim (CEA Saclay)

Session Classification: Communications

Contribution ID: **60**

Type: **not specified**

RD51 Collaboration Meeting in Santiago and topical workshop on “New Horizons in TPCs”

Wednesday 24 June 2020 09:20 (10 minutes)

Presenters: GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela (ES)); COLAS, Paul (CEA/IRFU,Centre d’etude de Saclay Gif-sur-Yvette (FR))

Session Classification: Communications