

# **1st DRD1 Collaboration Meeting**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## WP - general introduction

*Monday 29 January 2024 15:30 (20 minutes)*

**Presenter:** GASIK, Piotr (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

**Session Classification:** Work Packages

Contribution ID: 2

Type: **not specified**

## **WP1 - Genuine trackers/hodosopes (large area muon systems, inner tracking/vertexing)**

*Monday 29 January 2024 15:50 (20 minutes)*

**Presenters:** OCHI, Atsuhiko (Kobe University (JP)); PUGLIESE, Gabriella (Universita e INFN, Bari (IT)); AIELLI, Giulio (INFN e Universita Roma Tor Vergata (IT)); IODICE, Mauro (INFN - Sezione di Roma Tre); FARINELLI, Riccardo (Universita e INFN, Ferrara (IT))

**Session Classification:** Work Packages

Contribution ID: 3

Type: **not specified**

## **WP2 - Inner and central tracking with PID (Drift Chambers)**

*Monday 29 January 2024 16:10 (20 minutes)*

**Presenters:** Dr GRANCAGNOLO, Francesco (Universita & INFN Lecce (IT)); DE FILIPPIS, Nicola (Politecnico/INFN Bari (IT))

**Session Classification:** Work Packages

Contribution ID: 4

Type: **not specified**

## **WP3 - Inner and central tracking with PID (Straw Chambers)**

*Monday 29 January 2024 16:30 (20 minutes)*

**Presenter:** WINTZ, Peter (Forschungszentrum Juelich GmbH (DE))

**Session Classification:** Work Packages

Contribution ID: 5

Type: **not specified**

## **WP4 - Inner and central tracking with PID (Tracking TPCs)**

*Monday 29 January 2024 16:50 (20 minutes)*

**Presenters:** GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela (ES)); FERRER RIBAS, Esther (Université Paris-Saclay (FR)); GARCIA, Francisco (Helsinki Institute of Physics (FI)); KAMINSKI, Jochen (University of Bonn (DE)); GASIK, Piotr (GSI - Helmholtzzentrum für Schwerionenforschung GmbH (DE))

**Session Classification:** Work Packages

Contribution ID: 6

Type: **not specified**

## WP5 - Calorimetry

*Monday 29 January 2024 17:10 (20 minutes)*

**Presenter:** LAKTINEH, Imad (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Work Packages

Contribution ID: 7

Type: **not specified**

## WP6 - Gaseous photon detectors

*Tuesday 30 January 2024 14:00 (20 minutes)*

**Presenters:** TESSAROTTO, Fulvio (Universita e INFN Trieste (IT)); Dr DASGUPTA, Shuddha Shankar (National Institute of Science Education and Research, Bhubaneswar)

**Session Classification:** Work Packages



Contribution ID: 8

Type: **not specified**

## WP7 - Gaseous timing detectors

*Tuesday 30 January 2024 14:20 (20 minutes)*

**Presenters:** GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela (ES)); BRUNBAUER, Florian Maximilian (CERN); LAKTINEH, Imad (Centre National de la Recherche Scientifique (FR)); DEPPNER, Ingo-Martin (Physikalisches Institut der Universität Heidelberg)

**Session Classification:** Work Packages

Contribution ID: 9

Type: **not specified**

## **WP8 - TPCs as reaction and decay chambers (rare events, neutrino physics, nuclear physics)**

*Tuesday 30 January 2024 14:40 (20 minutes)*

**Presenters:** GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela (ES)); FERRER RIBAS, Esther (Université Paris-Saclay (FR))

**Session Classification:** Work Packages

Contribution ID: **10**

Type: **not specified**

## WP9 - Beyond HEP

*Tuesday 30 January 2024 15:00 (20 minutes)*

**Presenters:** VARGA, Dezso (HUN-REN Wigner Research Centre for Physics (HU)); CROCI, Gabriele (Universita & INFN, Milano-Bicocca (IT)); BORTFELDT, Jona (Ludwig Maximilians Universitat (DE))

**Session Classification:** Work Packages

Contribution ID: 11

Type: **not specified**

## **Introduction to WG4 - Objectives - Organization (15' +5')**

*Wednesday 31 January 2024 11:40 (20 minutes)*

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

Contribution ID: 12

Type: **not specified**

## Simulation of Resistive Detectors (15' + 5')

*Wednesday 31 January 2024 12:20 (20 minutes)*

**Presenter:** JANSSENS, Djunes (Vrije Universiteit Brussel (BE))

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

Contribution ID: 13

Type: **not specified**

## **Simulation of RPC detectors with updated R134 cross sections and future prospects (15' + 5')**

*Wednesday 31 January 2024 12:00 (20 minutes)*

**Presenter:** STOCO, Dario (ETH Zürich)

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

Contribution ID: 14

Type: **not specified**

## Simulation of signal propagation in small-gap RPCs (12' + 5')

*Wednesday 31 January 2024 14:00 (15 minutes)*

**Presenter:** SUN, Yongjie (University of Science and Technology of China (CN))

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

Contribution ID: 15

Type: **not specified**

## Overview of simulation activities at SINP and future prospects (12' + 3')

*Wednesday 31 January 2024 14:15 (15 minutes)*

**Presenters:** MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN)); MUKHOPADHYAY, Supratik (Saha Institute of Nuclear Physics (IN))

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



Contribution ID: 16

Type: **not specified**

## **Simulation and physics modelling of Active Target TPCs (12' + 3')**

*Wednesday 31 January 2024 14:30 (15 minutes)*

**Presenter:** Dr AYYAD, Yassid (Facility for rare Isotope Beams)

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

Contribution ID: 17

Type: **not specified**

## Introduction to WG3

*Wednesday 31 January 2024 09:00 (20 minutes)*

**Presenter:** MANDELLI, Beatrice (CERN)

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: **18**

Type: **not specified**

## Gas properties database

*Wednesday 31 January 2024 09:20 (20 minutes)*

**Presenter:** THAMM, Nick (Rheinisch Westfaelische Tech. Hoch. (DE))

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: **19**

Type: **not specified**

## Eco-gas studies

*Wednesday 31 January 2024 09:40 (20 minutes)*

**Presenter:** ABBRESCIA, Marcello (Bari Physics Department and INFN)

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: 20

Type: **not specified**

## Gas systems for gaseous detectors

*Wednesday 31 January 2024 10:00 (20 minutes)*

**Presenter:** RIGOLETTI, Gianluca (CERN)

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: **21**

Type: **not specified**

## Resistive electrodes

*Wednesday 31 January 2024 10:20 (20 minutes)*

**Presenter:** MORELLO, Gianfranco (INFN e Laboratori Nazionali di Frascati (IT))

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: 22

Type: **not specified**

## New Wires with CHANGE

*Wednesday 31 January 2024 10:40 (20 minutes)*

**Presenter:** CHARLES, Gabriel (Université Paris-Saclay (FR))

**Session Classification:** Working Group 3: Gas and material studies

Contribution ID: 23

Type: **not specified**

## **Long-term and aging studies: the example of CMS Muon system**

**Presenter:** KUZNETSOVA, Katerina (University of Florida (US))

**Session Classification:** Working Group 3: Gas and material studies



Contribution ID: **24**

Type: **not specified**

## Intruduction

*Thursday 1 February 2024 15:00 (5 minutes)*

Working Group Tasks and Common Objectives

**Presenters:** FERRETTI, Alessandro (Universita e INFN Torino (IT)); OLIVERI, Eraldo (CERN); GUIDA, Roberto (CERN); TSIPOLITIS, Yorgos (National Technical Univ. of Athens (GR))

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 25

Type: **not specified**

## CERN EHN1 Test Beam Facility

*Thursday 1 February 2024 15:05 (20 minutes)*

**Presenter:** BANERJEE, Dipanwita (CERN)

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 26

Type: **not specified**

## Test Beam Plans 2024 - PICOSEC Collaboration

*Thursday 1 February 2024 15:35 (12 minutes)*

**Presenter:** BRUNBAUER, Florian Maximilian (CERN)

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 27

Type: **not specified**

## **Test Beam Plans 2024 - Resistive MPGD Calorimeter with timing measurement**

*Thursday 1 February 2024 15:47 (12 minutes)*

**Presenter:** LONGO, Luigi (Universita e INFN, Bari (IT))

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 28

Type: **not specified**

## **CMS R&D Detector Laboratory (904)**

*Thursday 1 February 2024 16:30 (15 minutes)*

**Presenter:** MORSE, David (Northeastern University (US))

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 29

Type: **not specified**

## GIF++ Irradiation Facility

*Thursday 1 February 2024 16:45 (20 minutes)*

**Presenter:** JAEKEL, Martin R. (CERN)

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: **30**

Type: **not specified**

## **GIF++ Plans 2024 - Group 1**

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: **31**

Type: **not specified**

## **GIF++/Test Beam Plans 2024 - Group 2**

**Session Classification:** Working Group 7: Common test facilities



Contribution ID: 32

Type: **not specified**

## Outgassing and Ageing Laboratory

*Thursday 1 February 2024 17:25 (20 minutes)*

**Presenters:** VOROBEV, Konstantin (National Research Nuclear University MEPhI (RU)); ZHUKOV, Konstantin (Russian Academy of Sciences (RU)); GUIDA, Roberto (CERN)

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: **33**

Type: **not specified**

## Next steps with WPs

*Thursday 1 February 2024 11:30 (1 hour)*

Plenary discussion on the next organisational steps with WPs.

- approvals and reviews
- membership
- start of activities
- contact with FAs
- MoU addenda

**Session Classification:** Work Packages

Contribution ID: **34**

Type: **not specified**

## Newest developments of MRPCs

*Tuesday 30 January 2024 09:25 (25 minutes)*

**Presenters:** WANG, YI; WANG, Yi (Tsinghua University); WANG, Yi (Tsinghua University (CN))

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

Contribution ID: 35

Type: **not specified**

## The Future of TPC R&D

*Tuesday 30 January 2024 10:45 (25 minutes)*

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

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

Contribution ID: 36

Type: **not specified**

## Drift chamber developments for CEPC

*Tuesday 30 January 2024 09:00 (25 minutes)*

**Presenter:** ZHAO, Guang (Institute of High Energy Physics)

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

Contribution ID: 37

Type: **not specified**

## High rate capable RPCs : technical challenges

*Tuesday 30 January 2024 09:50 (25 minutes)*

**Presenter:** AIELLI, Giulio (INFN e Universita Roma Tor Vergata (IT))

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

Contribution ID: **38**

Type: **not specified**

## The vertical and horizontal drift detectors in DUNE

*Tuesday 30 January 2024 11:10 (25 minutes)*

**Presenter:** DAWSON, Jaime Victoria (Centre National de la Recherche Scientifique (FR))

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

Contribution ID: 39

Type: **not specified**

## The organisation of the WG1 of DRD1. Discussion

*Tuesday 30 January 2024 11:35 (25 minutes)*

**Presenters:** RESNATI, Filippo (CERN); DEPPNER, Ingo-Martin (Physikalisches Institut der Universität Heidelberg); MOLERI, Luca (Weizmann Institute of Science (IL)); TYTGAT, Michael (Vrije Universiteit Brussel (BE)); COLAS, Paul (Université Paris-Saclay (FR)); WINTZ, Peter (Forschungszentrum Juelich GmbH (DE))

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



Contribution ID: 40

Type: **not specified**

## Applications of RPCs for muon systems

*Tuesday 30 January 2024 15:50 (20 minutes)*

**Presenter:** AIELLI, Giulio (INFN e Universita Roma Tor Vergata (IT))

**Session Classification:** Working Group 2: Applications

Contribution ID: 41

Type: **not specified**

## The CYGNO experiment

*Tuesday 30 January 2024 17:10 (20 minutes)*

**Presenter:** DHO , Giorgio

**Session Classification:** Working Group 2: Applications

Contribution ID: 42

Type: **not specified**

## IDEA/FCC Muon system with $\mu$ RWELL

*Tuesday 30 January 2024 16:30 (20 minutes)*

**Presenter:** FARINELLI, Riccardo (Universita e INFN, Ferrara (IT))

**Session Classification:** Working Group 2: Applications

Contribution ID: 43

Type: **not specified**

## **BHEP applications: neutron science**

*Tuesday 30 January 2024 16:10 (20 minutes)*

**Presenter:** CROCI, Gabriele (Universita & INFN, Milano-Bicocca (IT))

**Session Classification:** Working Group 2: Applications

Contribution ID: 44

Type: **not specified**

## **Mu2e experiment and innovations of the Mu2eTracker**

*Tuesday 30 January 2024 16:50 (20 minutes)*

**Presenter:** MUKHERJEE, Aseet (FNAL)

**Session Classification:** Working Group 2: Applications

Contribution ID: 45

Type: **not specified**

## WG2 organisation

*Tuesday 30 January 2024 15:30 (20 minutes)*

**Session Classification:** Working Group 2: Applications

Contribution ID: 46

Type: **not specified**

## Simulation of the radiation field in GIF++ (12' + 3')

*Wednesday 31 January 2024 14:45 (15 minutes)*

**Presenter:** FERRARA, Nicola (Universita e INFN, Bari (IT))

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

Contribution ID: 47

Type: **not specified**

## DRD1 Detector School

*Thursday 1 February 2024 10:00 (30 minutes)*

Previous experience (RD51 school)

Plans for a 2024 DRD1 School

Discussion

**Presenter:** BRUNBAUER, Florian Maximilian (CERN)

**Session Classification:** Working Group 8: Knowledge Transfer, Training, Career Promotion



Contribution ID: 48

Type: **not specified**

## WG8 scope and introduction

*Thursday 1 February 2024 09:00 (30 minutes)*

**Session Classification:** Working Group 8: Knowledge Transfer, Training, Career Promotion

Contribution ID: 49

Type: **not specified**

## Topical workshops, outreach & career promotion

*Thursday 1 February 2024 09:30 (30 minutes)*

**Presenter:** IODICE, Mauro (INFN - Sezione di Roma Tre)

**Session Classification:** Working Group 8: Knowledge Transfer, Training, Career Promotion

Contribution ID: 50

Type: **not specified**

## Resources and DRD1 Notes

*Thursday 1 February 2024 10:30 (30 minutes)*

**Presenters:** PAOLONI, Alessandro (INFN e Laboratori Nazionali di Frascati (IT)); BRUNBAUER, Florian Maximilian (CERN)

**Session Classification:** Working Group 8: Knowledge Transfer, Training, Career Promotion

Contribution ID: 51

Type: **not specified**

## **Presentation of the WG6 "Detector production and industrialisation"**

*Friday 2 February 2024 09:00 (10 minutes)*

**Presenter:** JEANNEAU, Fabien (Université Paris-Saclay (FR))

**Session Classification:** Working Group 6: Detector production

Contribution ID: 52

Type: **not specified**

## Saclay's MPGD workshop

*Friday 2 February 2024 09:25 (20 minutes)*

**Presenter:** MORENO, Brahim Alain (Université Paris-Saclay (FR))

**Session Classification:** Working Group 6: Detector production

Contribution ID: 53

Type: **not specified**

## T2K TPC production

*Friday 2 February 2024 09:45 (20 minutes)*

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

**Session Classification:** Working Group 6: Detector production

Contribution ID: 54

Type: **not specified**

## Gap RPC production facility @ KODEL

*Friday 2 February 2024 10:05 (15 minutes)*

**Presenter:** LEE, Kyong Sei (Korea University (KR))

**Session Classification:** Working Group 6: Detector production

Contribution ID: 55

Type: **not specified**

## RPC production ?

**Presenter:** IASELLI, Giuseppe (Universita e INFN, Bari (IT))

**Session Classification:** Working Group 6: Detector production



Contribution ID: 56

Type: **not specified**

## New collaboration for new wires

*Friday 2 February 2024 10:20 (10 minutes)*

**Presenter:** CHARLES, Gabriel (Université Paris-Saclay (FR))

**Session Classification:** Working Group 6: Detector production

Contribution ID: 57

Type: **not specified**

## The ALERT project

*Friday 2 February 2024 10:30 (20 minutes)*

**Presenter:** CHARLES, Gabriel (Université Paris-Saclay (FR))

**Session Classification:** Working Group 6: Detector production

Contribution ID: 58

Type: **not specified**

## Introduction to WG5

*Wednesday 31 January 2024 15:00 (30 minutes)*

**Presenters:** LUPBERGER, Michael (University of Bonn (DE)); LUPBERGER, Michael (University of Bonn)

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: 59

Type: **not specified**

## **Development of front-end ASICs for micro-pattern gas detectors emphasized with TPC**

*Wednesday 31 January 2024 15:30 (20 minutes)*

**Presenters:** Prof. DENG, Zhi (Tsinghua University (CN)); Prof. DENG, Zhi

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: **60**

Type: **not specified**

## Relation with DRD7

*Wednesday 31 January 2024 15:50 (20 minutes)*

**Presenters:** BREGANT, Marco (Universidade de Sao Paulo (BR)); MARTOIU, Sorin (Horia Hulubei National Institute of Physics and Nuclear Engineering (RO)); MARTOIU, Sorin; MARTOIU, Sorin

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: **61**

Type: **not specified**

## **New ASICs for gaseous detectors: HGCROC and HKROC**

*Wednesday 31 January 2024 16:20 (20 minutes)*

**Presenter:** Dr DE LA TAILLE, Christophe (OMEGA (FR))

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: **62**

Type: **not specified**

## Stabilized Voltage Divider

*Wednesday 31 January 2024 16:40 (20 minutes)*

**Presenter:** KRAUSS, Jakob (University of Bonn)

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: **63**

Type: **not specified**

## Scalable Readout System

*Wednesday 31 January 2024 17:00 (20 minutes)*

**Presenter:** MULLER, Hans (University of Bonn (DE))

**Session Classification:** Working Group 5: Electronics for gaseous detectors



Contribution ID: 64

Type: **not specified**

## XPU parallel processing unit

*Wednesday 31 January 2024 17:20 (20 minutes)*

**Presenter:** Dr BIRA, Calin (Universitatea Nationala de Stiinta si Tehnologie Politehnica Bucuresti (RO))

**Session Classification:** Working Group 5: Electronics for gaseous detectors

Contribution ID: 65

Type: **not specified**

## DRD1 Test beam Semi Permanent Installation

*Thursday 1 February 2024 15:25 (10 minutes)*

**Presenter:** TSIPOLITIS, Yorgos (National Technical Univ. of Athens (GR))

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 66

Type: **not specified**

## **Long-term and aging studies: the example of CMS Muon system**

*Thursday 1 February 2024 17:05 (20 minutes)*

**Presenter:** KUZNETSOVA, Katerina (University of Florida (US))

**Session Classification:** Working Group 7: Common test facilities

Contribution ID: 67

Type: **not specified**

## CERN MPT Workshop

*Friday 2 February 2024 09:10 (15 minutes)*

**Presenters:** OLIVERI, Eraldo (CERN); DE OLIVEIRA, Rui (CERN)

**Session Classification:** Working Group 6: Detector production