

# **4th DRD4 Collaboration Meeting**



## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## IRRAD Campaign

**Presenters:** HAEFELI, Guido (EPFL - Ecole Polytechnique Federale Lausanne (CH)); NAPOLETANO, Gauri (EPFL - Ecole Polytechnique Federale Lausanne (CH))

**Session Classification:** Work Package 5 (restricted meeting to WP5 participants only)

Contribution ID: 2

Type: **not specified**

## Introduction and general news

*Tuesday 14 October 2025 14:30 (25 minutes)*

**Presenter:** FIORINI, Massimiliano (Universita e INFN, Ferrara (IT))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 3

Type: **not specified**

## Report on WP1 activities

*Tuesday 14 October 2025 14:55 (45 minutes)*

**Presenter:** PESTOTNIK, Rok (Jozef Stefan Institute (SI))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 4

Type: **not specified**

## Report from the CB Chair

*Friday 17 October 2025 09:00 (20 minutes)*

**Presenter:** WILKINSON, Guy (University of Oxford (GB))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 5

Type: **not specified**

## Report on WP3 activities

*Friday 17 October 2025 09:20 (35 minutes)*

**Presenter:** CARDINALE, Roberta (INFN e Universita Genova (IT))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 6

Type: **not specified**

## Report on WP4 activities

*Friday 17 October 2025 09:55 (35 minutes)*

**Presenter:** Prof. LAPINGTON, Jon (University of Leicester (GB))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 7

Type: **not specified**

## Report on WP5 activities

*Friday 17 October 2025 10:30 (20 minutes)*

**Presenter:** LEVERINGTON, Blake (Heidelberg University (DE))

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)



Contribution ID: 8

Type: **not specified**

## DRD4 test-beam campaigns

*Friday 17 October 2025 11:20 (20 minutes)*

**Presenter:** JAKOBSEN, Sune (CERN)

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 9

Type: **not specified**

## **Collaboration-wide discussion (on common facilities, transversal activities, simulations, outreach, training, etc.)**

*Friday 17 October 2025 11:40 (50 minutes)*

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: **10**

Type: **not specified**

## Report on WP2 activities

*Thursday 16 October 2025 10:40 (30 minutes)*

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

**Session Classification:** DRD4 Plenary Meeting (open to the whole DRD4 community)

Contribution ID: 11

Type: **not specified**

## **Rings of Light, Speed of AI: YOLO for Cherenkov Reconstruction**

*Thursday 16 October 2025 09:50 (20 minutes)*

<https://arxiv.org/abs/2509.26273>

**Author:** BORSATO, Martino (Universita & INFN, Milano-Bicocca (IT))

**Co-author:** MARTINELLI, Maurizio (Universita & INFN, Milano-Bicocca (IT))

**Presenter:** BORSATO, Martino (Universita & INFN, Milano-Bicocca (IT))

**Session Classification:** Working Group 4 meeting (open to the whole DRD4 community)

Contribution ID: 12

Type: **not specified**

## **Flare: an open source data workflow orchestration tool**

*Thursday 16 October 2025 09:00 (20 minutes)*

**Presenters:** DESAI, Aman (Adelaide University (AU)); HARRIS, Cameron

**Session Classification:** Working Group 4 meeting (open to the whole DRD4 community)

Contribution ID: 13

Type: **not specified**

## **Development of a scintillating fiber detector for neutrino experiments**

*Thursday 16 October 2025 17:00 (20 minutes)*

**Presenters:** DIEMINGER, Till (ETH Zurich); DIEMINGER, Till Conrad (ETH Zurich (CH))

**Session Classification:** Working Group 5 meeting (open to the whole DRD4 community)

Contribution ID: 14

Type: **not specified**

## Towards large scale scintillator based muon systems

*Thursday 16 October 2025 17:25 (20 minutes)*

**Presenters:** ROSATI, Stefano (Istituto Nazionale di Fisica Nucleare Sezione di Roma 1); ROSATI, Stefano (Sapienza Universita e INFN, Roma I (IT))

**Session Classification:** Working Group 5 meeting (open to the whole DRD4 community)

Contribution ID: 15

Type: **not specified**

## design of the bRICH for ALICE3

*Thursday 16 October 2025 11:30 (20 minutes)*

The design of the new bRICH detector and results from tests so far will be presented.

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

**Session Classification:** Working Group 2 meeting (open to the whole DRD4 community)



Contribution ID: **16**

Type: **not specified**

## **Development of a DIRC like TOF detector at STCF**

*Thursday 16 October 2025 11:55 (20 minutes)*

**Presenter:** LIN, Xuesen

**Session Classification:** Working Group 2 meeting (open to the whole DRD4 community)

Contribution ID: 17

Type: **not specified**

## Update on the prospects for eco-friendly gases for Cherenkov detectors

*Thursday 16 October 2025 12:45 (20 minutes)*

**Author:** HALLEWELL, Gregory (Centre National de la Recherche Scientifique (FR))

**Presenter:** HALLEWELL, Gregory (Centre National de la Recherche Scientifique (FR))

**Session Classification:** Working Group 2 meeting (open to the whole DRD4 community)

Contribution ID: **18**

Type: **not specified**

## **High-count rate saturation behaviour in MCP-PMTs**

*Wednesday 15 October 2025 09:00 (20 minutes)*

**Presenter:** Prof. CHEN, Ping

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: **19**

Type: **not specified**

## **FPGA TDC for TOF-PET detector based on FPMT**

*Wednesday 15 October 2025 09:20 (20 minutes)*

**Presenter:** NING, Zhe

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: **20**

Type: **not specified**

## **A Timing ASIC for TOF-PET application**

*Wednesday 15 October 2025 09:40 (20 minutes)*

**Presenter:** YAN, Xiongbo (Institute of High Energy Physics)

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: **21**

Type: **not specified**

## Compendium - Motivation

*Wednesday 15 October 2025 10:20 (10 minutes)*

**Presenter:** FIORINI, Massimiliano (Universita e INFN, Ferrara (IT))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 22

Type: **not specified**

## **Compendium - Physical principles and common architectures**

*Wednesday 15 October 2025 11:20 (30 minutes)*

**Presenter:** Prof. LAPINGTON, Jon (University of Leicester (GB))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 23

Type: **not specified**

## Compendium - Photo-multiplier Tube

*Wednesday 15 October 2025 11:55 (30 minutes)*

**Presenter:** QIANS, Sen Qian

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)



Contribution ID: 24

Type: **not specified**

## **Compendium - Microchannel Plate Photomultiplier Tubes (MCP-PMTs)**

*Wednesday 15 October 2025 12:30 (30 minutes)*

**Presenter:** ROMANO, Angela (University of Birmingham (GB))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 25

Type: **not specified**

## **Compendium - Characterization methods/setup and standardization**

*Wednesday 15 October 2025 10:30 (30 minutes)*

**Presenter:** QIANS, Sen Qian

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 26

Type: **not specified**

## Compendium - SPAD physics process

*Wednesday 15 October 2025 16:30 (30 minutes)*

**Presenter:** RAYMOND, Kurtis

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 27

Type: **not specified**

## Compendium - SPAD radiation damage

*Wednesday 15 October 2025 17:00 (30 minutes)*

**Presenter:** RATTI, Lodovico (Pavia University and INFN (IT))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: **28**

Type: **not specified**

## Compendium - SiPM

*Wednesday 15 October 2025 15:20 (30 minutes)*

**Presenters:** DALMASSON, Jacopo; KACHRU, Priyanka

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 29

Type: **not specified**

## Compendium - Digital SiPM

*Wednesday 15 October 2025 17:30 (30 minutes)*

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: **30**

Type: **not specified**

## **Fraunhofer BSI SPAD array**

*Wednesday 15 October 2025 14:00 (30 minutes)*

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 31

Type: **not specified**

## **Exploiting time and spatial correlations to reduce noise in SiPM-based RICH detectors**

*Wednesday 15 October 2025 16:10 (20 minutes)*

**Presenter:** PENA RODRIGUEZ, Jesus (Bergische Universität Wuppertal)

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)



Contribution ID: **32**

Type: **not specified**

## **Sherbrooke 3D integrated SPAD arrays**

*Wednesday 15 October 2025 14:40 (30 minutes)*

**Presenter:** Prof. CHARLEBOIS, Serge (Université de Sherbrooke)

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 33

Type: **not specified**

## Designing Future RICH Detectors with OpticaEM

*Thursday 16 October 2025 10:15 (20 minutes)*

**Presenters:** CARDINALE, Roberta (INFN e Universita Genova (IT)); PETROLINI, Alessandro (Dipartimento di Fisica dell'Università di Genova and INFN - ITALY); SPADARO NORELLA, Elisabetta (INFN e Universita Genova (IT))

**Session Classification:** Working Group 4 meeting (open to the whole DRD4 community)

Contribution ID: **34**

Type: **not specified**

## **RICH detector for the ALADDIN experiment**

*Thursday 16 October 2025 12:20 (20 minutes)*

**Presenter:** SPADARO NORELLA, Elisabetta (INFN e Universita Genova (IT))

**Session Classification:** Working Group 2 meeting (open to the whole DRD4 community)

Contribution ID: 35

Type: **not specified**

## **Time distribution of photoelectrons from different materials**

*Thursday 16 October 2025 17:50 (20 minutes)*

**Presenter:** MARGARYAN, Amur (A. I. Alikhanyan National Science Laboratory (Yerevan Physics Institute) AANL)

**Session Classification:** Working Group 6 meeting (open to the whole DRD4 community)

Contribution ID: 36

Type: **not specified**

## **Status and perspectives of hydrophobic aerogel production**

*Thursday 16 October 2025 14:10 (20 minutes)*

**Presenter:** Dr TABATA, Makoto (Chiba University)

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 community)

Contribution ID: 37

Type: **not specified**

## **FastRICH and other ASICs for future photon detectors**

*Thursday 16 October 2025 14:35 (20 minutes)*

**Presenter:** KEIZER, Floris (CERN)

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 community)

Contribution ID: **38**

Type: **not specified**

## **Construction and test of the TORCH full-size module prototype**

*Thursday 16 October 2025 15:00 (20 minutes)*

**Presenter:** LEHURAUX, Marion (University of Warwick (GB))

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 community)

Contribution ID: 39

Type: **not specified**

## **Contruction and test of SiPM detector prototypes with ALCOR readout for the ePIC dRICH detector at the EIC**

*Thursday 16 October 2025 15:25 (20 minutes)*

**Presenter:** PREGHENELLA, Roberto (INFN, Bologna (IT))

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 coomunity)



Contribution ID: 40

Type: **not specified**

## Measurements of CF4 scintillation properties

*Thursday 16 October 2025 16:10 (20 minutes)*

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

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 community)

Contribution ID: 41

Type: **not specified**

## **An integrated housing with active cooling for SiPM arrays of the next generation RICH Detectors**

*Thursday 16 October 2025 16:35 (20 minutes)*

**Presenters:** CARDINALE, Roberta (INFN e Universita Genova (IT)); PEZZULO, Serena (INFN e Universita Genova (IT))

**Session Classification:** Working Group 3 meeting (open to the whole DRD4 community)

Contribution ID: 42

Type: **not specified**

## **A generic analysis framework for DRD's test beams activities, TDAnalyser**

*Thursday 16 October 2025 09:25 (20 minutes)*

**Author:** FORTHOMME, Laurent (AGH University of Krakow (PL))

**Co-authors:** KAYNAK, Berkan (Istanbul University (TR)); POTOK, Onur (Istanbul University (TR))

**Presenters:** FORTHOMME, Laurent (AGH University of Krakow (PL)); KAYNAK, Berkan (Istanbul University (TR)); POTOK, Onur (Istanbul University (TR))

**Session Classification:** Working Group 4 meeting (open to the whole DRD4 community)

Contribution ID: 43

Type: **not specified**

## Progress on Quartz Fiber Detectors

*Thursday 16 October 2025 18:10 (20 minutes)*

**Author:** PENZO, Aldo (University of Iowa (US))

**Presenters:** OZKORUCUKLU, Suat (Istanbul University (TR)); PENZO, Aldo (University of Iowa (US))

**Session Classification:** Working Group 6 meeting (open to the whole DRD4 community)

Contribution ID: 44

Type: **not specified**

## **Compendium or review - next step of the process**

*Tuesday 14 October 2025 15:40 (10 minutes)*

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 coomunity)

Contribution ID: 45

Type: **not specified**

## Status of document and feedback about process

*Tuesday 14 October 2025 15:50 (15 minutes)*

**Presenter:** ROMANO, Angela (University of Birmingham (GB))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 46

Type: **not specified**

## Review process and schedule update

*Tuesday 14 October 2025 16:05 (10 minutes)*

**Presenter:** RETIERE, Fabrice

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 47

Type: **not specified**

## Gap: Hyrbrid photo-detector

*Tuesday 14 October 2025 16:15 (10 minutes)*

**Presenter:** ROMANO, Angela (University of Birmingham (GB))

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 coomunity)



Contribution ID: 48

Type: **not specified**

## **Gap: Emerging or unconventional technologies (WG6)**

*Tuesday 14 October 2025 16:25 (15 minutes)*

**Presenter:** RETIERE, Fabrice

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 49

Type: **not specified**

## **Thermal Cesium Release in PMTs Revealed by Resonant Laser Spectroscopy and Its Correlation with Quantum Efficiency**

*Wednesday 15 October 2025 10:00 (20 minutes)*

**Presenter:** SIMONELLI, Andreino

**Session Classification:** Working Group 1 meeting (open to the whole DRD4 community)

Contribution ID: 50

Type: **not specified**

## **Time distribution of photoelectrons from different materials**

**Presenter:** MARGARYAN, Amur (A. I. Alikhanyan National Science Laboratory (Yerevan Physics Institute) AANL)

**Session Classification:** Working Group 6 meeting (open to the whole DRD4 community)