

DRD1 2026-2027

6th DRD1 Collaboration Meeting, October 10^h, 2025

<https://events.camk.edu.pl/event/124/>

Eraldo and Maxim on behalf of the management team
(Anna, Beatrice, Eraldo, Fulvio, Hans, Leszek, Maxim, Piotr)

DRD1 2024-2025

Two community-wise active years, with many collaborative initiative ...

Due to time constraints, we will focus mainly on activities where we worked closely together...

Disclaimer (I): We'll surely miss something ...

Disclaimer (II): Slides based on input from many of you — apologies when you're not explicitly acknowledged..

Collaboration Meeting (Scientific Meeting)

June 2025

 16 Jun - 20 Jun **5th DRD1 Collaboration Meeting and Topical Workshop Towards Sustainable Gas Mixtures for Future Detectors**

February 2025

 24 Feb - 28 Feb **4th DRD1 Collaboration Meeting and Topical Workshop on Detector Manufacturing and Production**

December 2024

 09 Dec - 13 Dec **3rd DRD1 Collaboration Meeting**

June 2024

 17 Jun - 21 Jun **2nd DRD1 Collaboration Meeting & Topical Workshop on Electronics for Gaseous Detectors**

January 2024

 29 Jan - 02 Feb **1st DRD1 Collaboration Meeting**

A community of experts exchanging knowledge, providing critical peer review, inspiring each other, and sparking new collaborations, exploring new solutions... or other ways..



Allows the community to get to know each other better and gives the host institute the opportunity to showcase the collaboration's activities at their Institution.

Topical Workshops

Electronics for Gaseous Detectors

2024

2nd DRD1 Collaboration Meeting & Topical Workshop on Electronics for Gaseous Detectors

17–21 Jun 2024
CERN
Europe/Zurich timezone

Enter your search term

Overview
Timetable
Contribution List
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Videoconference
Support
✉ florian.brunbauer@cern.ch
✉ eraldo.oliveri@cern.ch

Timetable

< Mon 17/06 Tue 18/06 Wed 19/06 Thu 20/06 Fri 21/06 All days >

Print PDF Full screen Detailed view Filter

09:00 Topical Workshop on Electronics for Gaseous Detectors
Hans Müller, Lucian Schenker, Marco Bregant, Maxime Gouzevitch, Michael Luepberger, Sora Marini

10:00

11:00

12:00 31/0-004 - IT Amphitheatre, CERN 09:00 - 12:30

Detector Manufacturing and Production

2025

DRD1 Topical Workshop on Detector Manufacturing and Production

27–28 Feb 2025
CERN
Europe/Zurich timezone

Enter your search term

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✉ eraldo.oliveri@cern.ch

DRD1 TOPICAL WORKSHOP on Detector Manufacturing and Production



Towards Sustainable Gas Mixtures for Future Detectors

2025

5th DRD1 Collaboration Meeting and Topical Workshop Towards Sustainable Gas Mixtures for Future Detectors

16–20 Jun 2025
CERN
Europe/Zurich timezone

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Print PDF Full screen Detailed view Filter

09:00 Towards Sustainable Gas Mixtures for Future Detectors (WG3): Regulatory landscape, interdisciplinary and industrial perspectives
Alessandra Pastore, Beatrice Mandelli, Francesco Renga, Gianfranco Morello, Stefan Roth

10:00

11:00 40/52-A01 - Salle Anderson, CERN 09:00 - 11:10

WG5

<https://indico.cern.ch/event/1413681/timetable/#20240619>

WG6

<https://indico.cern.ch/event/1543925/timetable/#20250618>

WG3, WG4

WG3 & Common Developments: Gas Monitoring System

Development of a Modular Gas Monitoring System (GMS) for Real-Time Quality Assessment in Gaseous Radiation Detectors

Gianluca Rigoletti, Ori Salomon, Florian Brunbauer
On behalf of EP-DT Gas detector development and Gas Systems Group

07/10/2025



EP-DT
Detector Technologies



DRD1 COLLABORATION
MEETING
06-10 OCTOBER
2025

WARSAW

Organized by:
ASTROCENT



Conclusions

A portable gas monitoring systems was designed and produced for gaseous detectors

- Designed **for the DRD community**: available units at CERN and instructions to build copies
- Focused on **portability**, ease of construction and **open documentation**
- Dedicated mechanical and electrical design/drawings done
- Assembly instructions, BOM, installation guide, and quick setup guide are available on GitLab

Gas parameters examined: Pressure, humidity, oxygen, flow, environment parameters

- Sensors reliability checked and sensor calibration performed on flow sensors

Software and hardware selected for simplicity and availability

- Employing hardware easily available
- Using open source technologies

One unit was built, available at the GDD. Another unit is being built

- Documentation and assembly instructions being validated
- Ongoing identification of improvement for future models



G. Rigoletti O. Salomon 13

<https://events.camk.edu.pl/event/124/contributions/1185/attachments/804/2177/Rigoletti%20-%20Salomon%20-%206th%20DRD1%20collaboration%20meeting.pdf>

<https://indico.cern.ch/event/1518078/overview>

WG4 Common Developments: Modelling and Simulation

April 2025

- 29 Apr [WG4 Working Meeting - Simulations and Measurements at Low Pressures](#)
- 15 Apr [WG4 working meeting - Future EU project Proposal "Simulation of Large Avalanches including Space-Charge Effects"](#)

March 2025

- 25 Mar [WG4 working meeting - Documentation & Simulation School](#)

February 2025

- 10 Feb [WG4 working meeting - Low Pressure Simulation & Measurements](#)

July 2024

- 09 Jul [Fifth WG4 working meeting - Reaction/Decay TPC simulations - postponed](#)

June 2024

- 11 Jun [Fourth WG4 working meeting - Large Avalanches Topical Meeting](#)

April 2024

- 09 Apr [Third WG4 working meeting](#)

March 2024

- 12 Mar [Second WG4 working meeting](#)

February 2024

- 13 Feb [First WG4 working meeting](#)

WG4 Working Meeting - Simulations and Measurements at Low Pressures

Tuesday 29 Apr 2025, 14:00 → 16:00 Europe/Zurich

zoom WG4 working meeting

14:00 → 14:10 **Introduction to meeting** 10m

Speakers: Djunes Janssens (CERN), Marcello Abbrescia (Università e INFN Bari (IT)), Maryna Borysova (Weizmann Institute of Science & KINR, NAS of Ukraine), Ozkan Sahin (Jülich University (TR)), Paulo Fonte, Piet Verwilligen (Università e INFN Bari (IT)), Supratik Mukhopadhyay (Jawahar Institute of Nuclear Physics (IN))

14:15 → 14:35 **Low Pressure Simulations: Overview of Current Status** 20m

Speaker: Heinrich Schindler (CERN)

14:40 → 15:00 **Advances in the Operational Principles of MICROMEGAS Gas Detectors at Low Pressure** 20m

Speakers: Federico Pilo (Uni Pisa), giuseppe antonelli

15:05 → 15:25 **Gain and Scintillation Studies for MIGDAL's GEM Detector** 20m

Speakers: Dr Pawel Majewski (STFC/Rutherford Appleton Laboratory), Tom Szwarcner

15:30 → 16:00 **Discussion** 30m

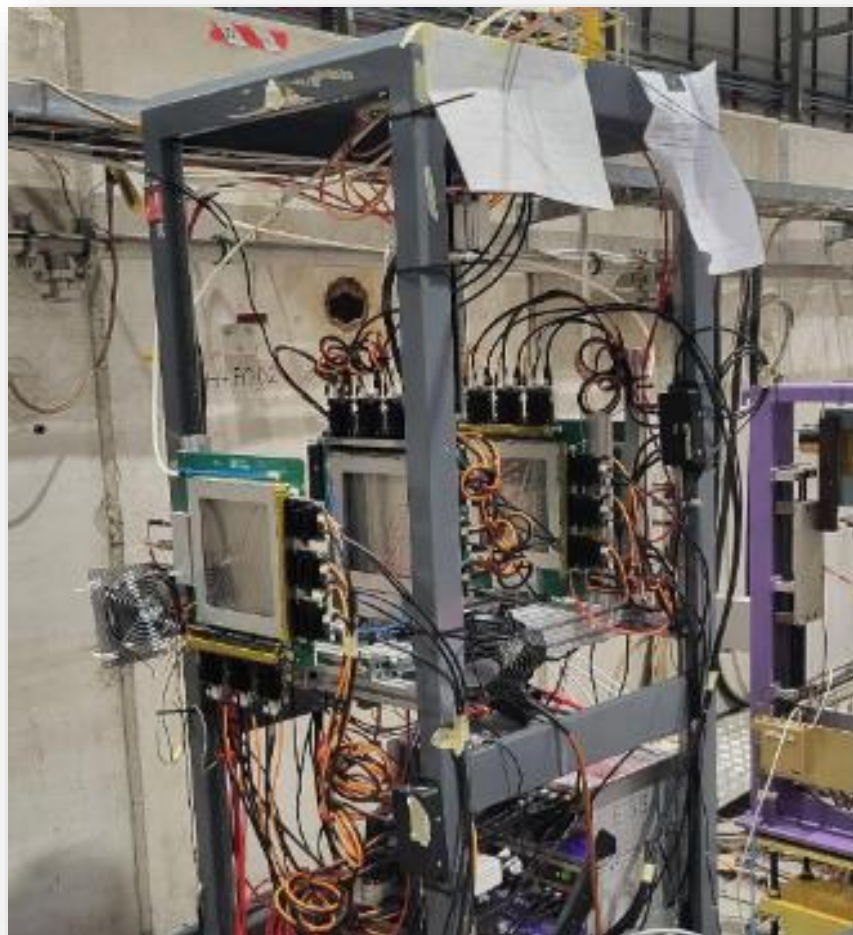
CERN EP-DT Detector Technologies DRD1 Gaseous Detector Technologies GDD Gas Detectors Development Group

Space-charge effects in simulations of large avalanche dynamics

Tom Szwarcner | University of Oxford Supervisors: Djunes Janssens, Heinrich Schindler

https://events.camk.edu.pl/event/124/contributions/1169/attachments/827/2208/DRD1_4.pdf

WG5 Common Developments Electronics

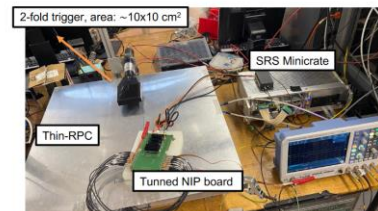
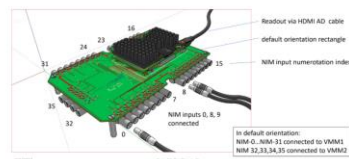


SRS/VMM3a DAQ for DRD1 test beam telescopes

VMM-3a – RPC coupling study

NIM Pattern Injector box for the VMM frontend
→ modified by removing C, direct RPC signal

VMM hybrid on NIP in default orientation



Cosmic setup @ GDD Lab

D. Ramos - 5th DRD1 Collaboration Meeting

RPC & VMM3a D.R. Lopez (INFN Bari)



MWPC Tracker VMM3a (July DRD1 TB)
D. Varga (HUN-REN Wigner Research Centre for Physics (HU))

New ASIC candidates for DRD1

SALSA (IEA SacLay IRFU and Univ Sao Paolo) *see talk by Damien today*

target EIC at EIC collider Micromegas and uRWELL
65 nm, CSA both pol, 64 ch, peaking 50-500ns, 0-500 fC, rate 100kHz, continuous and triggered
15mW/ch, 12 bit ADC (10 ENOB), embedded DSP processor, 4 output links 1Gbps

TORA (INFN Torino)

target MM and Straw of Amber experiment
CSA preamp, 64 ch, 2 gains 1 and 10 mV/fC, Cd <150pF, <10mW/ch
peaking 75 - 150ns, <2 MHz

TIGER (INFN Univ Torino)

target Cylindric GEM for BESIII collab.
110nm, CSA preamp, 64 ch, <12mW/ch, dyn range up 50fC, tres <5ns
peaking 60 ns, 170 ns, SEU protected, 4x TX 8b/10 b encoded out



New versatile ASIC project for gas detectors of DRD1 (IFIN Bucharest et al.)

let us know which ASIC features are needed for your detectors

DRD1 Test Beam Campaigns @ H4/SPS

Research to advance technological development of Gaseous Detectors

Yorgos Tsiopolitis (Yorgos.Tsiopolitis@cern.ch), Eraldo Oliveri (Eraldo.Oliveri@cern.ch),

Karl Jonathan Flöthner (karl.jonathan.floethner@cern.ch)

Generic and Application driven R&D

Muon/Tracking: GEM, Micromegas, uRWELL, cylindrical/planar uRGroove, TPC, Straw

Timing: PICOSEC micromegas/uRWELL

Calorimetry: MPGD DHCAL

Project Driven R&D & Commissioning

HL-LHC: CMS ME0

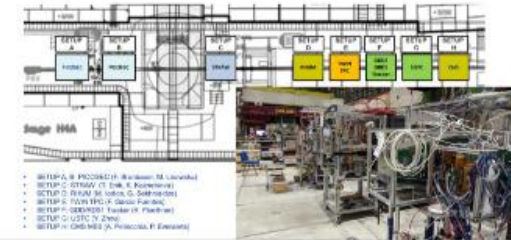
Twin TPC for MIXE

AMBER triple GEM (G4G)

FE electronics and DAQ

VMM3a for TPC, Tiger, Mu2e, ASD, GEMROC, SAMPIC

8 setups



[https://indico.cern.ch/event/1409215/contributions/5922965/subcontributions/479395/attachments/2843563/4973590/DRD1-April24-TestBeam-H4-Summary-Updated%20\(2\).pdf](https://indico.cern.ch/event/1409215/contributions/5922965/subcontributions/479395/attachments/2843563/4973590/DRD1-April24-TestBeam-H4-Summary-Updated%20(2).pdf)

8 setups



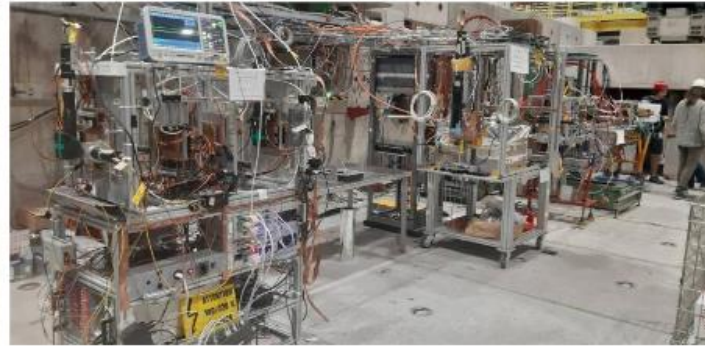
<https://indico.cern.ch/event/1436361/contributions/8044389/subcontributions/492820/attachments/2894558/5074788/DRD1-June-July24-TestBeam-H4-Summary-withStraws.pdf>

5 setups

BEAM H4, PPE134 – INSTALLATION (DRD1, Sept 18 – Oct 2)



<https://indico.cern.ch/event/1462624/contributions/8157737/subcontributions/508550/attachments/2939856/5164486/DRD1-September24-TestBeam-H4-SUMMARY.pdf>



3rd DRD1 CM - DRD1 test beam campaign 2024, Dec 12, 2024

3

+ many DRD1 groups running in parallel @ GIF++

DRD1 test beam campaigns

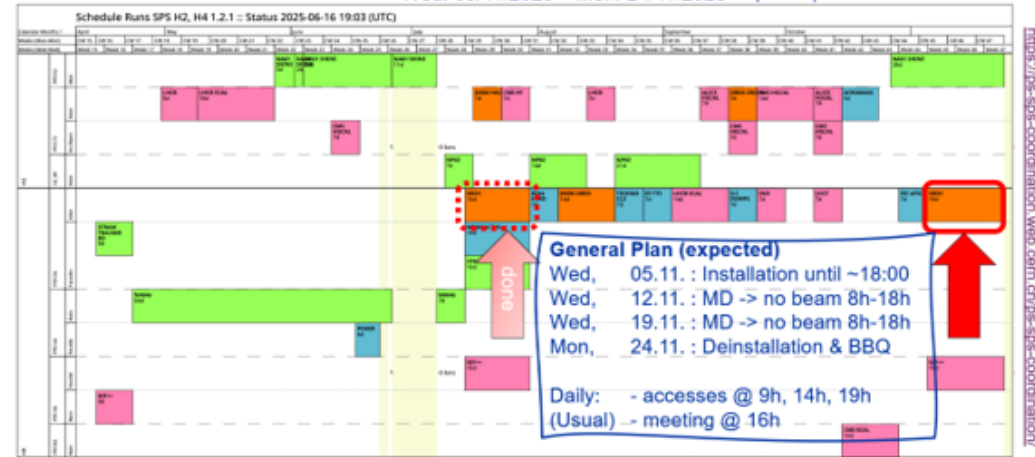
DRD1 H4(PPE134) 2025 Test Beam

Wed. 05/11/2025 – Mon. 24/11/2025

Yorgos Tsiopolitis: +41754118992
Karl Jonathan Flöthner: +41754110839
(Eraldo)

Two test beam campaigns in 2025

- Mon. 14/07/2025 – Wed. 30/7/2025 (13 groups)
 - Thanks for the great collaboration of all participants (e.g. the complete dismounting worked within 4h)
 - More information on Indico:
<https://indico.cern.ch/event/1578401/>
 - Some visual impressions on the next slide
- Wed. 05/11/2025 – Mon. 24/11/2025
 - Reaching the limit of PPE134 with potential 17 setups



1st DRD1 2025 test beam period (July 14 - July 30)

14 Jul 2025, 08:00 → 30 Jul 2025, 20:00 Europe/Zurich

EHN1 - PPE134 (CERN)

Eraldo Oliveri (CERN), Karl Jonathan Floethner (University of Bonn (DE)), Yorgos Tsiopolitis (National Technical Univ. of Athens (GR))

We profit a lot from the support in EHN1 (see more detailed below)

- Both test beam campaigns would have been impossible without the upgraded gas system!

Nikos and Bastien provide the general support (Beam Tuning and the Magnet).
Michael, Sylvain and the NA team provided excellent help with the craning and tables.
David & Ahmet are our primary contacts for gas infrastructure.
Pion and Magnet runs have to be arranged with GIF++ - Thanks for the flexibility!



DRD1

10/9/2025

Karl Jonathan Flöthner: +41754110839, Yorgos Tsiopolitis: +41754118992 (Eraldo)

1



DRD1
Gaseous Detector Technologies

October 10, 2025

DRD1, 6th Collaboration Meeting, October 6-10, 2025,
Warsaw

Current status (November)

<https://docs.google.com/spreadsheets/d/16Mqzecz0V4XCufhDHhCzhEq2GT9TmlkJNb2j3HA4j4g/edit?usp=sharing>

- 17 setups (+ 2 parasitic) → 17 confirmed interest (some reference... July was 13)

Team/Institute	Period of Interest	Beam requirements	Magnetic Field	Required gas (mixtures and approximate)	Involved	Infrastructure needs (moveable and/or remotely controllable tables, DRD1 telescopes)	Radioactive Sources (for	Survey for
HYDRA tracker (TU Darmstadt)	All	MIPs, scan (up to a few 100 kHz)	No	Ar-CO ₂ (90:10), T2K mixture (Ar-CF ₄ -iC ₄ H ₁₀ 95:3:2), if available	TU Darmstadt, GSI	LAPP	55Fe and/or 90Sr	No
DUNE Bologna group - INFN Section of Bologna	All	muons pions electrons	no magnetic field	Ar/CO ₂ 85/15, Ar/CO ₂ 70/30	INFN section of Bologna DUNE Collaboration	if possible, 1 DESY and 2 XSCA → BIG RED for November	No sources needed	N/A
USTC	All	muon and pion (for high rate test)	1T magnetic field for 2 shifts	Ar-CO ₂ -CF ₄ /45:15:40 and Ar-C ₄ H ₁₀ /98:2	USTC and UICP (Lanzhou Institute of Chemical Physics)	scintillators and NIM modules for trigger, HV power supply, SRS/APV25 telescope; 2nd beam: one normal table	Fe55 and Sr90	No need
GEM-TPCs	All	Muons and pions and scan	No	Mixer: He/CO ₂ and Ar/CO ₂	HIP PSI Czech Technical University CERN	two XSCA tables, if possible	No	No
PICOSEC	All	Muons, Pions?	no	Ar/CO ₂ 70/30, Ne/CF ₄ /C ₂ H ₆	PICOSEC Coll.	2 DESY		
Optical Readout	All	Muons, Pions?	no	Ar/CF ₄	GDO			
DRD1 telescope	All	Muons and Pions	no	Ar/CO ₂ 70/30	GDO			
INFN Bari RPC group	Summer and/or fall	pions and muons	no	Unclear	University of Bari	DRD1 tracker telescope		
Optical HP TPC	fall	muons and pions, ideally around 2.5 GeV _c	0.5T, if possible.	Ar/CF ₄ (99/1)	IGFAE, UVigo, IFIC, Liverpool	DRD1 telescope and trigger appreciated (Space resolution <1mm needed)	Fe55	In principle not needed.
MPGD-HCAL	November	pions and muons	Not needed	Ar-CO ₂ -C ₄ H ₁₀ (93:5:2) Ar-CO ₂ -CF ₄ (45:15:40)	CERN INFN & University of Bari INFN RMI INFN Naples Weizmann	DESY and fixed table	Not needed	Not needed
FCC μ RWELL	November	muons, some run of pions	no	ArCO ₂ (70:30) and ArCO ₂ CF ₄ (45:15:40)	INFN-FE, INFN-BO, INFN-TO, INFN-LNF	DESY and fixed table	no	
JLAB: PICOSEC	November 2025	Muons	No	Ar/CO ₂ 70/30, Ne/CF ₄ /C ₂ H ₆	Jefferson Lab, Florida Tech, U. of Virginia, Stony Brook U. Univ. of South Carolina	Same as PICOSEC (second PICOSEC telescope)	no	Same as PICOSEC
JLAB: EIC ePIC MPGDs	November 2025	pions and muons	Yes	Ar-CO ₂ (80/20), Ar-CO ₂ -iso (90/7/3), Ar-iso (95/5), Ar-CO ₂ -CF ₄ (45, 10, 45)	Jefferson Lab, CEA Saclay, INFN Roma II	XSCA or DESY (ideally); 3 to 4 racks for HV, electronics and DAQ	No	Yes
Thomas Jefferson National Accelerator Facility, USA	November, 2025	pions and muons	1.5 T GOLIATH magnet is important requirement	ArCO ₂ (80:20) Ar-CO ₂ -iC ₄ H ₁₀ (95:3:2) Ar-CO ₂ -CF ₄	Jefferson Lab, Florida Institute of Technology, University of Virginia	DESY or XSCA and LAPP needed. NIM crate/rack for electronics Trigger for SRS	Not required	Yes
USTC RICH for STCF	November	Muons	no	Ar/CO ₂ 93/7	USTC	Fixed table	55Fe	No
FCC-ee straw tracker	November							
Tandem GEM-TPC	November	scan pions (or muons)	Not needed.	Ar/CO ₂ 80/20 as default, if possible 70/30 & 90/10	Wigner RCP	One support table (movable preferred) with space below (for DAQ) if available, trigger scintillator signals few NIM crate slots	Not needed.	Not needed.
INFN Roma Tre and Napoli	November 5 - 19	- muons - Lower priority: a short period with pions with a scan in rate	Not needed	Ar/CO ₂ /isobutane 93/5/2	INFN Roma Tre and Napoli / RHUM Project	IF AVAILABLE: A movable table for large chamber scan	Not needed	Not needed
PARASITIC: straws	July (maybe November)	muons	Not needed.	Ar/CO ₂ 93/7 & 70/30	INP	None	None	None
PARASITIC: minicactus	July (maybe November)	muons	Not needed	No gas	Irfu/CEA, IFAE Barcelona, University of Liverpool	Need one MCP signal. Moveable table. Remote control would be a plus, but not mandatory.	None	None

DRD1 Gaseous Detector School Series

First School
outside CERN



**RD51
Micro Pattern Gaseous Detectors
School**
CERN
27 November - 1 December 2023

Scientific program

- Gas detectors physics
- MPGD technologies
- Readout technologies
- Simulation and modelling
- Manufacturing techniques
- Applications of MPGDs

Lectures will be given by:

- Jona Bortfeldt (LMU Munich)
- Marcus Cortesi (Michigan State University)
- Rui De Oliveira (CERN)
- Sethu Ferner Ribes (IPUCBA/Universit  Paris-Saclay)
- Piotr Gaski (GGA/F4R)
- Paolo Jengo (INFN Roma Tre)
- Michael Luehner (University of Bonn)
- Enrico Oliveri (CERN)
- Davide Pire (INFN Roma)
- Fabio Sauli (CERN)
- Rob Vaeberhof (CERN)
- Pia Vervilligen (INFN Bari)

Altamoras will be dedicated to hands-on laboratory exercises. Students are invited to present a poster in a dedicated session.
School website and registration:
<https://indico.cern.ch/event/rd51mpgd/school>
Application deadline: July 17, 2023
Free registration (supported by RD51 Collaboration)
Contacts: Florian Br nzbauer (CERN), Mauro Iodice (INFN Roma Tre)

RD51 Collaboration

GDD
Gas Detectors Development

CERN

QR Code

**DRD1
Gaseous Detectors
School**
CERN
November 27 - December 6, 2024

Scientific program

- Gaseous detector physics
- Gaseous detector technologies
- Readout technologies
- Simulation, modelling and reconstruction
- Manufacturing techniques
- Applications of gaseous detectors

The school consists of academic lectures and hands-on laboratory exercises.
The lecture program will cover MPGD, MRPC and wire-based detector technologies.
Lecture sessions are open to the community and can be followed in-person or by remote connection.

School website and registration
<https://indico.cern.ch/event/dr1school2024>
Application deadline: July 31, 2024
Free registration for students.
Students are invited to present a poster in a dedicated session.
Contact: drd1-school@cern.ch

DRD1
Gaseous Detector Technology

CERN

QR Code

**DRD1
Gaseous Detectors
School**
FTD, University of Bonn, Germany
September 17-24, 2025

Scientific program

- Gaseous detector physics
- Gaseous detector technologies
- Readout technologies
- Simulation, modelling and reconstruction
- Manufacturing techniques
- Applications of gaseous detectors

The school consists of academic lectures and hands-on laboratory exercises.
The lecture program will cover MPGD, MRPC and wire-based detector technologies.
Lecture sessions are open to the community and can be followed in-person or by remote connection.

School website and registration
<https://indico.cern.ch/event/dr1school2025>
Application deadline: May 21, 2025
Free registration for students.
Students are invited to present a poster in a dedicated session.

Local organising committee

Matthias B�ll	S�rgey Korolov
Oliver B�ll	Oliver B�ll
Philipp B�ll	Tina Sch�tler
Andreas B�ll	

Contact
drd1-school@cern.ch
Florian Br nzbauer, Mauro Iodice

DRD1
Gaseous Detector Technology

FTD

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**DRD1
Gaseous Detector
School**

**Facility for Rare Isotope
Beams (FRIB)
Michigan State University
(MSU), USA**

2026

2nd DRD1 Gaseous Detectors School, FTD, University of Bonn, Germany from September 17-24, 2024

1st DRD1 Gaseous Detectors School, CERN from November 27th to December 6th, 2024

RD51 Micro Pattern Gaseous Detectors School, CERN from November 27th to December 1st, 2023

DRD1 School at FTD, Bonn

First **DRD1 Gaseous Detectors** school outside CERN was held at the FTD, Bonn, Germany from September 17-24.

24 students from 12 different countries followed a lecture program of 18h and 8 different lab exercises covering MPGDs, (M)RPCs and wire-based detectors. Students presented their own work in a poster session.

Almost 50 lecturers and tutors from DRD1 institutes with a strong participation from German colleagues contributed to the school.

Lecture materials and recording are available on the website (accessible after registration) and >100 people have signed up to follow the lecture program:

<https://indico.cern.ch/event/1522987/>

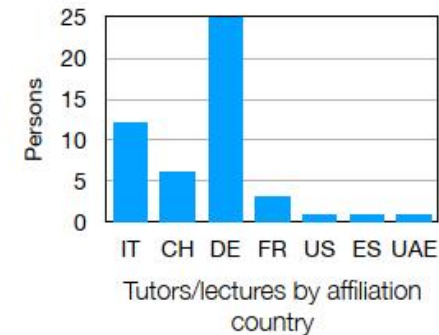
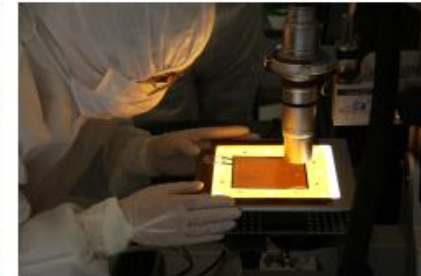
Reports (in German):

<https://www.uni-bonn.de/de/neues/acht-tage-im-zeichen-modernster-gasdetektortechnologien>

<https://www.pi.uni-bonn.de/de/nachrichten/die-drd1-gaseous-detectors-school-2025-an-der-uni-bonn>

<https://www.ftd.uni-bonn.de/de/aktuelles-datenbank/die-drd1-gaseous-detectors-school-2025-an-der-uni-bonn>

Images © Philip Hauer / Universität Bonn

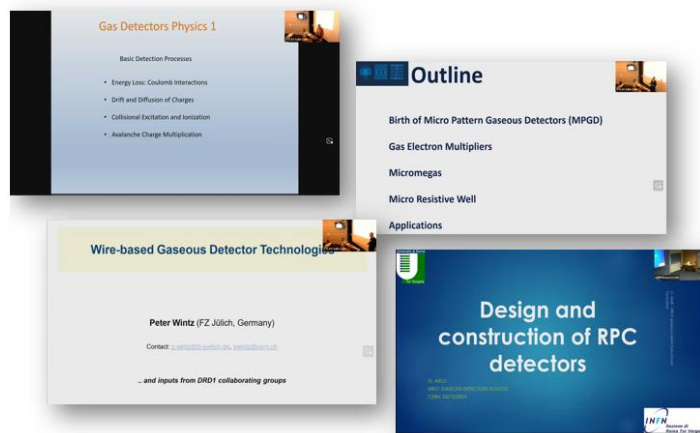


DRD1 Gaseous Detector School Series

(Recorded) Lectures

Lecture program

- Gas detectors physics
 - Primary ionisation
 - Charge transport
 - Avalanche multiplication
 - Gas properties
- Gaseous detector technologies
 - MPGDs
 - (M)RPCs
 - Wire-based detectors
- Readout technologies
 - Electronic readout
 - Optical & hybrid readout
- Simulation and modelling
- Manufacturing techniques
- Applications
 - High Energy Physics
 - Applications beyond HEP
 - Beyond fundamental research



[2nd DRD1 Gaseous Detectors School, FTD, University of Bonn, Germany from September 17-24, 2024](#)

[1st DRD1 Gaseous Detectors School, CERN from November 27th to December 6th, 2024](#)

[RD51 Micro Pattern Gaseous Detectors School, CERN from November 27th to December 1st, 2023](#)

Lecturers

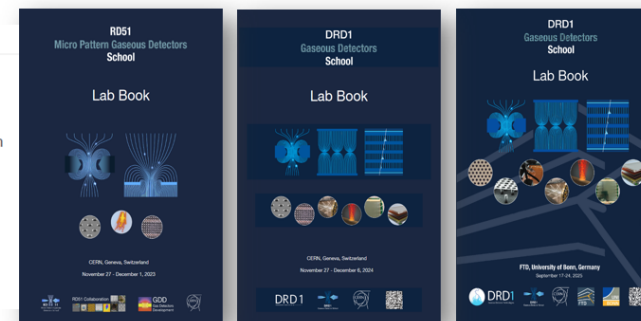
- Fabio Sauli
- Bernhard Ketzer
- Werner Riegler
- Esther Ferrer Ribas
- Marcello Abbrescia
- Peter Wintz
- Djunes Janssens
- Hans Muller
- Markus Ball
- Yassid Ayyad
- Giulio Aielli
- Gabriel Charles
- Yevgen Bilevych
- Davide Pinci
- Stefan Roth
- Piotr Gasik
- Konstantinos Nikolopoulos
- Paolo Iengo
- Margherita Primavera
- Imad Laktineh
- Jona Bortfeldt

We apologize for any Lecturer we may have inadvertently missed.

Hands-on & Lab Books

Laboratory Exercises

- Detector assembly
- Instrumentation and detector operation
- Characterisation
- Readout techniques
- Simulation



[2nd DRD1 Gaseous Detectors School, FTD, University of Bonn, Germany from September 17-24, 2024](#)

[1st DRD1 Gaseous Detectors School, CERN from November 27th to December 6th, 2024](#)

[RD51 Micro Pattern Gaseous Detectors School, CERN from November 27th to December 1st, 2023](#)

Tutors

- Barbara Liberti
- David Smyczek
- Dimtri Schaab
- Djunes Janssens
- Edoardo
- F. Procacci
- Gabriel Charles
- Ioannis Manthos
- Jan Glowcz
- Jan Paschek
- Jochen Kaminski
- Luca Quaglia
- Margherita
- Markus Ball
- Markus Gruber
- Max Knauseder
- Nicola De Filippis
- Paul Clemens
- Peter Wintz
- Philip Hauer
- Riccardo Farinelli
- Sabine Hartung
- Sara Leardini
- Shania Müller
- Theodoros Avgitas
- Thomas
- Thomas Block
- Tim Schüttler
- Valerio D'Amico

We apologize for any tutors we may have inadvertently missed.

2nd DRD1 Gaseous Detectors School, FTD, University of Bonn, Germany from September 17-24, 2024

1st DRD1 Gaseous Detectors School, CERN from November 27th to December 6th, 2024

RD51 Micro Pattern Gaseous Detectors School, CERN from November 27th to December 1st, 2023

DRD1 Summer Students

From June to September 2025, a total of six **summer student projects** were hosted at CERN in the context of the DRD1 collaboration.

Working group convenors had identified topics of **common interest to the collaboration** which would profit from 2-3 month summer student internships.

Space-charge effects and large avalanche dynamics calculations

Student: Thomas Szwarczer - 30.6 - 26.9

Supervisor: Djunes Janssens

Co-supervisor: Heinrich Schindler

Test Beam Analysis and Commissioning of a New Beam Telescope for DRD1

Student: Mirac Noyan Özdemir - 9.6 - 5.9

Supervisor: Karl Flöthner

Co-supervisor: Eraldo Oliveri

Gas monitoring sensors and real-time visualisation

Student: Ori Salomon - 30.6 - 26.9

Supervisor: Gianluca Rigoletti

Co-supervisor: Florian Brunbauer

Long-term performance studies of RPC detectors operated with eco-friendly gas mixtures at the CERN GIF++ facility

Student: Henrietta Szalai - 30.6 - 5.9

Supervisor: Beatrice Mandelli

Co-supervisor: Marcello Abbrescia

Characterization of scintillation in gases at varying pressures

Student: Genaro Barco - 16.6 - 8.8

Supervisor: Pablo Amedo

Co-supervisor: Florian Brunbauer

Performance studies of small Straw Tracker prototypes

Student: Margarita Banchshikova - 16.6 - 8.8

Supervisor: Katerina Kuznetsova

Co-supervisor: Giuseppe Pezzullo

Summer 2025 (F. Brunbauer, CB meeting)

Work Packages

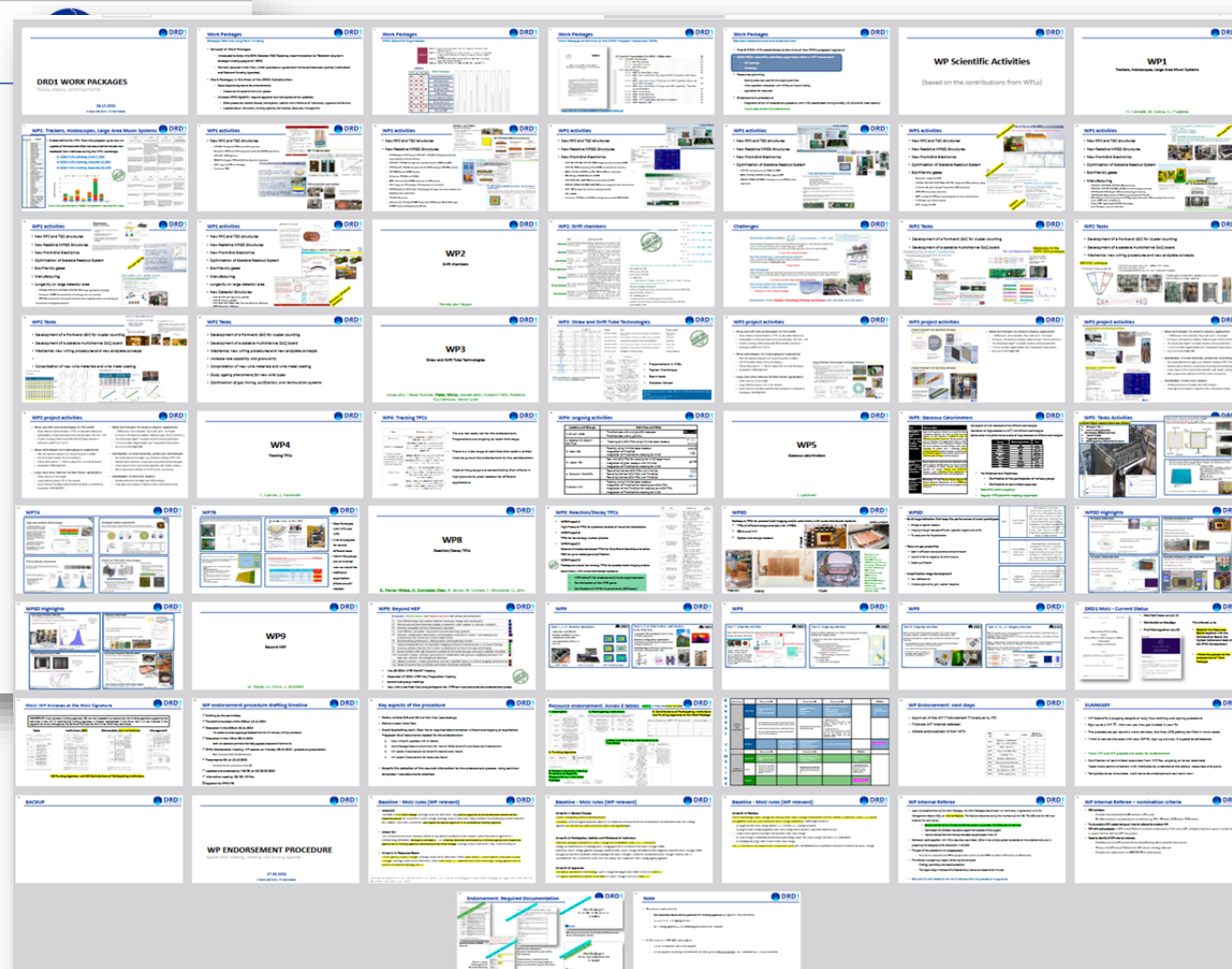
DRD1 WORK PACKAGES

Goals, status, endorsements

06.10.2025

P. Gasik (GSI/FAIR + TU Darmstadt)

Scientific Overview of the ongoing activities by Piotr on Monday Plenary session





WEIZMANN
INSTITUTE
OF SCIENCE



DRD1

Common project: Development of Prepreg with Controllable Resistivity

Luca Moleri

on behalf of Oliver Kortner (MPI) and Rui De Oliveira (CERN EP-DT-EF)

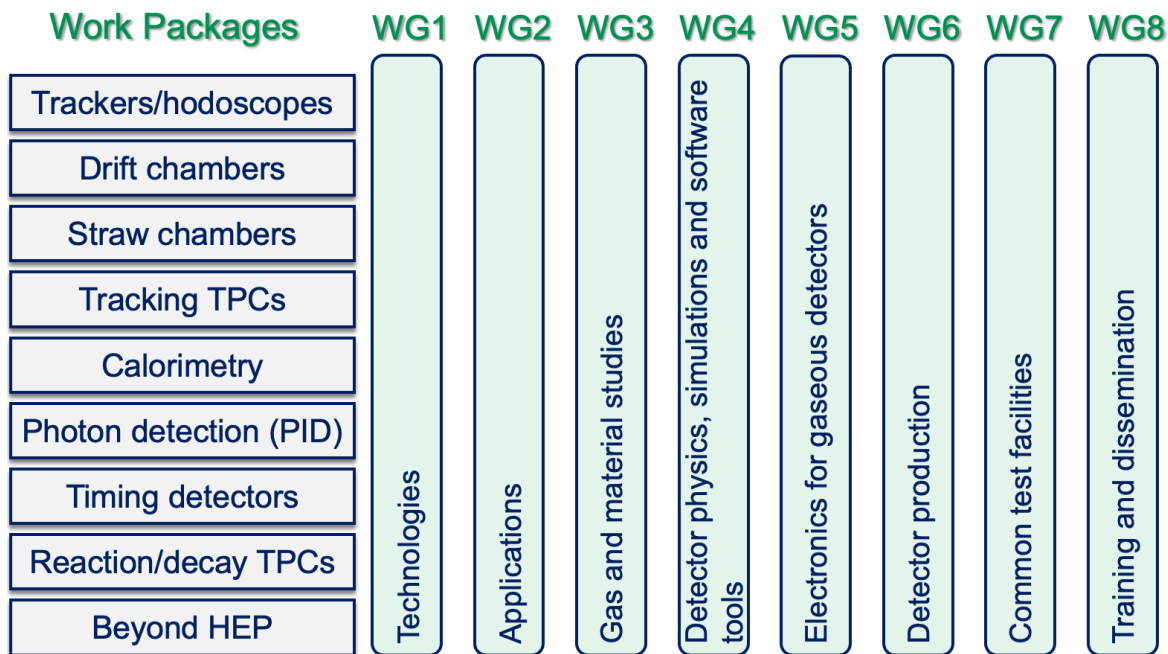
DRD1 collaboration meeting, Warsaw - 10/10/25

https://events.camk.edu.pl/event/124/contributions/1244/attachments/838/2227/251010_Resistive_prepreg_common_project_DRD1-collaboraton-meeting.pdf

DRD1 2026-2027

A glimpse of the visions on the next two years from the SPs and CB Chair elections...

DRD1



Common Activity	
Common Developments	
Gas and Material Studies	Gas and material properties studies. Eco-friendly mixtures. Outgassing and ageing studies.
Gas systems control and monitoring	Development of gas mixers, monitoring and calibration units for laboratory use.
Modelling and simulations	Training, measurements of gas parameters relevant for simulation (in synergy with WG3), access to computing hardware, services and software licenses
Electronics	Common developments on FE ASICs, DAQ and Instrumentation
Common Facilities	
Detector Manufacturing and Workshop	Common equipment, test new manufacturing techniques, training and transfer to industry
Common Laboratory and Test Beam	Common Test Beams (semi-permanent installation at CERN/SPS), support for common test and characterization (in synergy with WG3) laboratories.
Common Projects	
Blue-sky and Generic R&D	Project involving at least three DRD1 members in areas of common interest to the DRD1 community
Detector physics R&D	
Novel Applications	
Technology R&D	
Industry Technology Transfer	
Scientific Network	
Collaboration Meetings and Topical Workshops	Three collaboration meetings per year, with one of them held outside CERN. Ad-hoc topical workshops extended to other communities.
Conferences and awards	Support to gas detector conferences and workshops.
Schools and training	DRD1 Gaseous Detector School, knowledge and training dissemination initiatives.

DRD1 spokespersons and CB chair candidates documentation and presentations

📅 Friday 19 Sept 2025, 13:00 → 18:00 Europe/Zurich

📍 OnLine

<https://indico.cern.ch/event/1587849/>

DRD1 Collaboration Board Chair Vision Statement – Anna Colaleo

Dear Colleagues,

It is a great honor for me to be nominated for a second term as Chair of the DRD1 Collaboration Board. This recognition increases my motivation to serve our community with even more attention and dedication.

Achievements in the first DRD1 mandate

I consider what we achieved in the first mandate a success of our entire community. With the support of the full Collaboration, we moved from a conceptual idea to a real and inclusive research organization.

Through a bottom-up process, we created a solid structure: eight cross-disciplinary Working Groups, nine Work Packages on strategic activities, a Scientific Coordination Board to share progress, a Management Board reflecting the complexity of our identity, and more recently the *Kanawara* Board to monitor that sufficient resources are allocated to our activities. I am proud to have contributed to building this structure, fostering exchange and promoting a collaborative culture based on diversity and inclusivity.

During my mandate, I worked to keep DRD1 autonomous, with the Collaboration Board as the main decision-making body, ensuring its decisions were respected both internally and externally. Major decisions were always based on consultation and consensus, supported by structured communication with agendas circulated in advance, thorough reviews, efficient endorsement. I promoted equal participation from both large and small institutes, enhancing the visibility of contributions and distributing responsibilities fairly. I also actively sought feedback from all institutions, sometimes insisting upon responses were delayed, because I believe that everyone's voice matters and that decisions are stronger when broadly shared.

I also ensured special attention to students and young colleagues, supporting them in different roles and regions, guaranteeing transparent appointments, and encouraging their active participation in schools and DRD1 Collaboration Weeks.

I welcomed new institutes, supported joint projects and long-term plans. At the same time, I always ensured that we could maintain the space for new ideas, even those starting from individual initiative.

One of my first actions was the preparation of the DRD1 Constitution, later shaping the organization in the MoU. This was a key step to strengthen the democratic spirit of the collaboration, and it remains a living document, open to review and improvement.

Drafting the DRD1 MoU was a major achievement. DRD1 led the preparation of a common core of articles for all DRD1s and negotiated annexes tailored to our needs. Our efficiency became a reference for the whole DRD1 community and for CERN, thanks to the extraordinary work of the Spokesperson, the CCB coordinators, the Management Board, and the CB, always ready to provide feedback and immediate support.

I also contributed to the preparation of the AIDAmonra successor, Onella, which tested our ability to collaborate and to identify common priorities. As a member of the Proposal Preparation Team, I worked to ensure gaseous detector activities were included in all relevant WPs, involving many DRD1 members,

Statement of Vision



for the position of DRD1 Spokesperson 2025

Marcello Abbrescia

Dear Colleagues,

It is with deep gratitude and humility that I accept the nomination as candidate for the role of DRD1 spokesperson. I am honored by the trust that has been placed in me, and I wish to begin by expressing my heartfelt thanks to all of you—the entire DRD1 community. Over the past years, we have seen how much can be achieved when talented scientists from across the globe join forces with a common goal. The progress of DRD1 has been the result of collective commitment, dedication, and vision. It is thanks to all of you that we now stand at a crucial juncture: for the first time, we can truly speak of a DRD1 community—a global body of researchers, engineers, and students devoted to gaseous detector technologies, united in their diversity and richness of experience.

This, in itself, is an extraordinary accomplishment. The creation of such a coherent worldwide community devoted to gaseous detector R&D is unprecedented in the history of our field. It is, in many ways, the realization of a long-held aspiration: to give structure, visibility, and strength to an area of research that has always been innovative and fertile, but often fragmented. Today, that aspiration has become reality. The challenge before us now is to consolidate this achievement and to carry it further, so that DRD1 becomes not only a hub for scientific excellence, but also a model for how a global collaboration can thrive.

At the very heart of our mission lies science. DRD1 exists to guide the research and development of gaseous detectors, and our future will be shaped by our ability to identify and support the most promising ideas. This requires deep knowledge, openness to innovation, and the courage to explore new directions. As spokesperson, I would be committed to ensuring that science remains the guiding

Statement for DRD1 Spokesperson

1. Introduction

The gaseous detector community has entered a decisive phase with the launch of DRD1. The success of RD51 showed what a coordinated framework can achieve when supported by a strong hub at CERN and a culture of openness: it accelerated the development of micro-pattern gaseous detectors and spread expertise across continents. DRD1 has the ambition to broaden this model to all gas detector technologies—RPC, TPC, wire chambers, MPGDs, large-volume detectors. This ambition is both promising and challenging.

I put forward my candidacy as an experienced participant in detector R&D and upgrade programs, someone who has observed from within how coordination multiplies results and how *representation* slows them down. My perspective is not confined to a single technology but stems from long engagement with RPC development and upgrades, from which I have drawn lessons on what works, what fails, and what should be adapted to benefit the entire community. My aim is to help DRD1 become the natural home for gaseous detector R&D, serving both the incremental needs of today and the long-term breakthroughs of tomorrow.

2. Analysis of the current situation

RD51 thrived because it was built on a visible and strong local hub at CERN. Shared laboratories and key construction facilities, combined with the presence of a strong local team of highly recognized MPGD designers, effectively lowered the threshold for any group to contribute and benefit. This core generated a momentum that pulled in institutes worldwide, focusing efforts on achieving new projects. DRD1, despite its broad scope, has struggled to reach the same level of coherence. Many technologies do not have a comparable hub at CERN. Their R&D remains dispersed across experiments, with knowledge often confined within the boundaries of large collaborations. As a result, valuable expertise too often remains locked within collaborations, as illustrated by cases such as ANUBIS and COODEX-9 (proposals by young teams for the search of dark matter at LHC, which could only advance through individual perseverance notwithstanding the cold, if not hostile feedback of the Management). In absence of a "code of conduct" for such cases, competition over IP and space, and concerns about loss of focus were the prevalent feelings, not compensated by the benefits: new young teams promoting and testing their technology saw institutes attracted by the mother project, creation of new precious pools of young experts in a crucial moment for HEP.

Communities tend to converge on **incremental R&D**—optimizing existing detectors, developing turnkey solutions or adopting a good-enough approach—often at the expense of long-term innovation and hybrid concepts, losing the capacity for deep innovation and the attitude for excellence necessary to remain at the research frontier.

An overall structural difficulty is induced by the typical decades-long turnover of contemporary HEP experiments, making them progressively unattractive for brilliant young researchers. The long life-cycle and the high investment on an accelerator machine, would suggest that a natural attitude is rightly a strong push on **new detector ideas** to be integrated into present experiments, adding value to the HL-LHC program and working as an attractive pole for excellent experimental physicists, much before the yet-to-come FCC program. A lot of potential is there to exploit beyond the still fundamental detector upgrade programs. DRD1 would be strongly concerned with this strategy, since gaseous detectors are ideal for external add-on integrated to the existing experiments.

Finally, the framework is complicated by external constraints. Funding agencies remain cautious in signing the MoU when commitments are vague. CERN facilities and space are scarce, making the creation of new hubs difficult. And the **long horizons of future colliders**—fifteen years or more—risk weakening motivation if no near-term benefits are offered. All these elements together explain why DRD1 has not yet reached the momentum of RD51.

DRD1 Co-Spokesperson Elections – Statement by Grady Oliveri

Geneva, September 9, 2025

Our Community

Two years ago, in my statement* for the first DRD1 Co-Spokesperson elections, I expressed my concerns about the transition from RD51, I stressed the importance of safeguarding RD51's legacy: its dynamic, community-based environment and strong R&D framework. Thanks to the constructive work of the DRD1 implementation team and the commitment of our community, many of those concerns were already addressed at the time of the first elections.

Today, after two years, I formally recognize our community for its responsible and dedicated effort in establishing and launching this collaboration. Our enlarged community, embracing all gaseous detector technologies, has successfully integrated while preserving the valuable assets and traditions of our past. We have strengthened mutual understanding, highlighted common ground, and built synergies. This is a remarkable achievement and a solid foundation for our future.

Yet, we must take further steps. We need to stimulate even more direct collaboration across technologies. By fostering genuine communication of ideas and knowledge exchange, we can generate new concepts, find solutions, and accelerate progress for the entire field. This is the essence of our bottom-up, community-driven approach.

Our Activities

Over the past two years, we have shown that DRD1 is not just an organizational framework but a living, effective collaboration capable of delivering results. Despite the inevitable slowness of formal processes, our community has been active and creative. Together, we have:

- **Fostered Scientific Exchange:** Organized Collaboration Meetings where the scientific work of our groups has been shared together with topical workshops on dedicated subjects such as electronics, detectors manufacturing, and gases, always ensuring broad community representation.
- **Supported Common Developments:** Initiated and supported developments connecting different technologies in simulation, electronics, and gas systems—leveraging opportunities like summer student programs to move them forward.
- **Facilitated Measurements and Collaborative Research:** Carried out successful test beam campaigns at the CERN SPS with remarkably broad participation. These campaigns provide training, knowledge and technology exchange, and cross-fertilization—while securing members' critical access to beam time.
- **Invested in Training and Education:** Run two Gaseous Detector Schools—one at CERN and one in Bonn. These schools are key opportunities for our community to learn together and build capacity for early-career researchers.
- **Initiated Common Projects:** Begun the process of launching Common Projects to strategically support research lines relevant to our technologies and community.

These accomplishments demonstrate the vitality of our collaboration and the value of working together. We must ensure that all groups have access to these activities and benefit from them.

* <https://indico.mfnec.org>

RESUME & STATEMENT – Dr. MAKSYM TITOV

Professional Resume

Maxim Titov was born on May 6, 1973 in Kyiv, Ukraine. He received PhD (Muon System in the HERA-B Experiment) from ITEP, Moscow in 2001, having carried out research in particle physics at DESY Hamburg, and completed his habilitation (HCB) in 2013 from the University Pierre and Marie Curie (Paris VI). Today, he is a Director of Research at CEA Saclay, France. A nuclear and particle physics researcher during his 30-years scientific career, Dr. Titov worked in both the development of advanced detector concepts and analyses of physics data from collider experiments, inevitably within the large international collaborations: HERA-B Experiment at DESY Hamburg, OS Experiment at Fermilab, ATLAS, CMS Experiments, RD51 and DRD1 Collaborations at CERN, International Linear Collider Project (ILC) in Japan, and Particle Data Group (PDG) Collaboration.

Dr. Titov personal contributions to experimental particle physics is reflected in a number of publications on Standard Model Higgs Boson and Beyond the Standard Model physics. In the field of instrumentation, he is an author of monographs on innovative detector concepts, reviews on gas detectors for the Particle Data Group, and co-editor of the Handbook of Particle Detection and Imaging. He has followed a variety of large-scale projects from conceptual design studies, through construction, assembly, problem identification, system integration to commissioning and maintenance of complex detector systems. Maxim Titov is a member of numerous international committees and advisory boards, dealing with technology cost schedules and planning issues. Since the beginning of 2024, Dr. Titov also serves as the Co-Chair of the Panel on "Sustainability Assessment of Future Accelerators" established by the European Laboratory Directors Group (ELD).

An important component of Dr. Titov's experience includes management of large collaborations and involvement into science-diplomacy matters. He was elected RD51 Co-Spokesperson (2022 & 2007-2016), and DRD1 Co-Spokesperson (2024-2025). He also served as a liaison (2015-2016) between Ukraine (Ministry of Science and Education (Ministry of Foreign Affairs) and CERN, facilitating the ratification process for the Associate Membership of Ukraine at CERN and contributed to the global efforts to facilitate science-diplomacy discussions between Japan, US and Europe Parliament delegates for the ILC project.

Public promotion of the value of the investments in large accelerator-based research infrastructures relies on the efforts and performance for explaining scientific potential and the returns for the society in knowledge, technology & education, where detector technologies play a fundamental role. As the scale and the cost of the frontier colliders increase, while the timescale for projects is becoming longer, fewer facilities can be realized. Moreover, several high-energy physics (HEP) laboratories becoming multi-purpose ones. The pursuit of ever-higher energies will surely be one of the future colliders in the current worldwide environment. We must take a holistic view of particle physics - whether we find Beyond Standard Model physics at the LHC or not - and select the path to follow in a prudent manner, while maintaining HEP accelerator and detector technological laboratories in all geographic regions. Our culture and management structure must evolve to confront these challenges.

Future DRD1 Challenges and Strategy

Today, DRD1 is the most advanced among the DRD collaborations in the process of MoU signature: more than 40 institutes has already signed the document. While being in administrative step, it has been crucial to promote and further enhance the current momentum and to advance interactions with Funding Agencies and to understand better that concerns. DRD1, through a community-driven approach, has already achieved more than the simple sum of all gaseous detector technologies (Large Volume Detectors, MPGD, RPC, TPC, Wire chambers) through integration of common tools and R&D activities. Many challenges faced by different concepts are shared, and there is a potential for outperforming in many areas, allowing a larger community of gaseous detectors to benefit. Building its foundation on the major hub around CERN GDD lab, CERN MPI workshop and common test-beam facility, the DRD1 serves as a global consortium of research institutions that bring together a wealth of expertise cutting-edge facilities, and common infrastructures. We must express a big appreciation to the entire DRD1 community for the great teamwork, and always recognize and reward the work done in support of common collaborative activities.

The DRD1 integrated structure - combining transversal WGs with application-oriented WPs - creates a multi-layered approach and allows to shape the DRD1 general-purpose R&D framework. Working Groups (WGs) - the core of the collaboration and a scientific platform to build community, and new strategic R&D, organized in Work

Summary of Marcello Abbrescia statement for DRD1 SP candidacy

Keyword:

Transparency, Inclusion, Democracy

Three practical proposals

Following the principles: Transparency, Democracy, Inclusion
I would propose three things to do:

- ✓ **Transparency:** Make ALL the agenda and minutes of high-level meetings (MB, IB, RB, etc.) PUBLIC.
- ✓ **Inclusion:** open public CALLS for ALL positions, both elective and following the nomination for the SPs; in this last case, of course, final decision will be by the SPs.
- ✓ **Democracy:** NEVER follow a top-down approach, but always bottom-up, in particular when projects involving an important part of the collaboration is included.

Final message

- Let me take the occasion to express my sincere **congratulations** to the renewed spokespersons, Eraldo and Maxim, and wish them the best best best good luck for this endeavor. These will be two exciting and crucial years for the DRD1 collaboration, and we all hope for the best.
- From my part, I wish to **heartfully thank** all the estimate colleagues who conceded me their trust. I will be more than happy to keep on providing my humble contribution to the DRD1 collaboration.

Thanks
a lot

Marcello

Summary of Giulio Aielli statement for DRD1 SP candidacy

Keyword:

HEP renaissance → technological ambition and scientific
discovery evolve together

Analysis of the problems and proposals (I)

Fragmentation

- RD51 success was based on a strong local hub of key experts and facilities
- The other technologies expertise and facilities are fragmented and scattered throughout the main experiments → difficult to be accessed by new communities and experiment proposals
- The “culture” of the large Experiments is not open enough for it
- **Proposal:** use DRD1 in a creative way to promote a hub of hubs, putting in place initiatives to promote the sharing of the technical resources seized in the experiments

Innovation vs. Invention

- The time scale for mature technologies is short to mid, future colliders have a long time scale.
- Most of resources are on established technologies, which have not sufficient use cases in the right time range, and applying them now for long time scale hinders the new ideas
- **Proposal:** use DRD1 to promote and easy mid time scale “add-on” experiments on existing experiments, as to say a major experiment can “adopt” a few minor ones. This would focus resources for invention and innovation on right time scales respectively

Emerging Challenges and strategy to face them

Emerging Challenges.

- Overcome fragmentation of expertise and facilities.
- Balance incremental vs long-term innovation.
- Clarify commitments for funding agencies.
- Secure access to CERN resources.
- Maintain engagement across long timelines.

5 points strategy

1. **Pragmatically obtain** the same effect of RD51, by boosting the networking of the resources available, wit pop-up hubs, and centrally offering tools to young collaborations such as patronage, tech. advisor, review etc
2. **Promote and incentive the culture of sharing** of Experiment's expertise for mutual benefits, this has to do wit promoting a cultural shift
3. **Exploit both the similarities and the differences** among gasous technologies, to bost positive competition and deep innovation
4. **Actively perform technology forecasting**, to offer guidance to the new base technologies
5. **Bidirectional dialogue** with theorists to imagine the new generation experiments

Giulio

Statements/Visions (Summary slide 😊) on DRD1 and upcoming years from Anna, Maxim and Eraldo

Closing remarks

We faced strong initial resistance in setting up this collaboration — nevertheless, we turned it into an opportunity:

- Creation of the DRD Collaborations requested by **ECFA**, but without direct support from funding agencies (even though ECFA expected them to be the main actors)
- We **built the DRD1 structure ourselves**, based on our needs and specificities → many others DRDs gradually adapted and adopted our model
- We, DRD1, took the lead in showing the value of DRD and how efficiently manage a Collaboration:
 - **Visibility for worldwide R&D activities**
 - **Shared know-how and common goals**
 - **Recognition of both large and small contributions**

I have always believed in this opportunity, and I sincerely thank the Collaboration for turning it into a shared success.

Spokesperson Candidate Statement: Maksym Titov

- *Being a candidate to the highest management role of DRD1 is a **GREAT HONOR** and I am **thankful** for being considered*
- *The **first two years of the DRD1 Collaboration** have shown that we have many talented people in the Collaboration and we should **continue building a dynamic and diversified DRD1 community**:*
 - *ensure strong DRD1 **Support to Young Scientists** by helping them to grow and be able to take higher responsibilities*
- *We **MUST MAINTAIN**:*
 - ***fair representation of all gas detector communities** in DRD1 coordination*
 - *transparent decision-making process*
 - *delegation of responsibilities (**no micromanagement**)*
- *I will be always available to listen to the collaboration members in order to **define strategic planning and build consensus for DRD1** next steps, **priorities**, and goals in an ambiance of collegiality, cooperation and greater intellectual freedom*
- *Based on my past experience in RD51/DRD1, other international collaborations, and deep understanding of the CERN internal environment, **I'll look forward working with all of you, guided by science, DRD1 collaborative spirit, and the principle of inclusiveness***

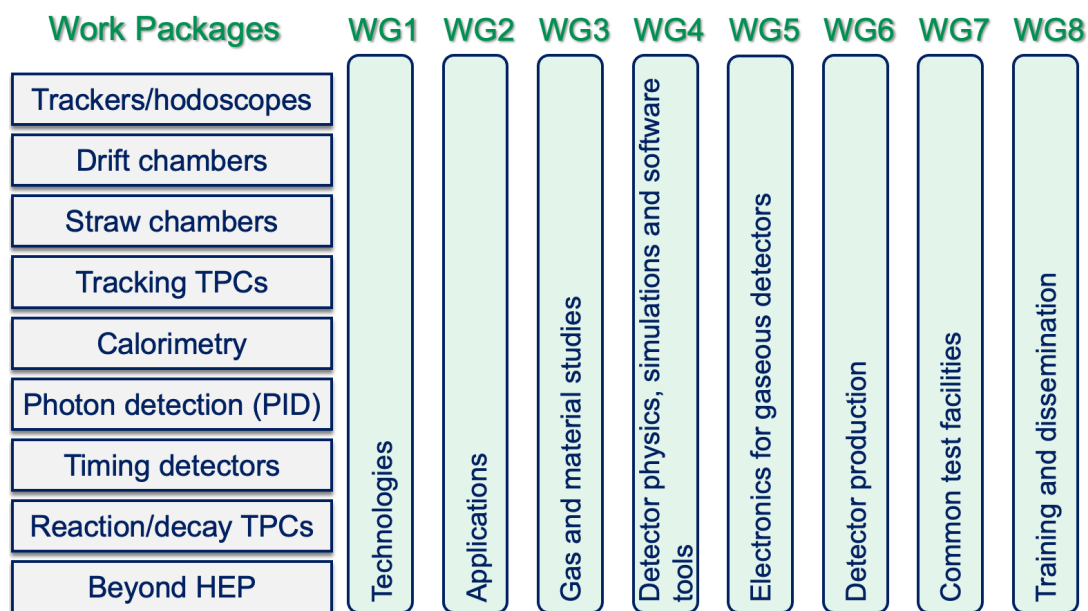
Summary

Some Personal Reflections on DRD1 2024–2025 and Priorities for 2026–2027

- We are succeeding in building a **new, large community and new, large collaboration**
- We have been successfully **proactive so far** in external engagements, and **it is important to maintain this approach**. Real establishment of Work Packages and recognition for them at funding agencies is one of the important next steps where a proactive approach will be beneficial.
- **Participation at management level**. We should encourage broader engagement, ensuring that responsibilities are **shared fairly and that all members contribute to shaping the scientific direction**.
- **Participation at Institute level**. We should strengthen participation, ensure that **all members can derive maximum value from the collaboration**, and provide every member with the opportunity to contribute.
- **Common activities and developments**: DRD1 already has several important initiatives underway, most of them within the Working Group activities. We should **continue to support these** and also **give attention to projects still in the pipeline**, helping them reach their full potential.

Important

- To understand the vision of our management team
- To share your own vision with our management team



Common Activity	
Common Developments	
Gas and Material Studies	Gas and material properties studies. Eco-friendly mixtures. Outgassing and ageing studies.
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Conferences and awards	Support to gas detector conferences and workshops.
Schools and training	DRD1 Gaseous Detector School, knowledge and training dissemination initiatives.

DRD1 Management

Function	Name	Institution Code
Collaboration Board Chairperson	Anna Colaleo	IT-INFN.BA
Collaboration Board Deputy Chairperson	Leszek Ropelewski	CH-CERN
Collaboration Board Secretary	Margherita Primavera	IT-INFN.LE
CB Chair Advisory Group	Markus Ball	DE-UBONN
	Alberto Blanco Castro	PT-LIP
	Alan Bross	US-FERMILAB
	Mary Cruz Fozz	ES-CIEMAT
	Jianbei Liu	CN-USTC
Co-Spokespersons	Esther Ferrer Ribas	FR-IRFU-CEA
	Eraldo Oliveri	CH-CERN
	Maxim Titov	FR-IRFU-CEA
Management Board Elected Members	Marcello Abbrescia	IT-INFN.BA
	Amos Breskin	IL-WIS
	Gabriel Chares	FR-ICLAL
	Paul Colas	FR-IRFU-CEA
	Nicola De Filippis	IT-INFN.BA
	Diego Gonzalez Diaz	ES-USC-IGFAE
	Giuseppe Iaselli	IT-INFN.BA
	Mauro Iodice	IT-INFN.RM3
	Jochen Kaminski	DE-UBONN
	Thorsten Lux	ES-IFAE
	Michael Tytgat	BE-VUB
	Peter Wintz	DE-FZJ-GSI-UBOCHUM
Management Board Members nominated by SPs	Kondo Gnanvo	US-TTNAF-JLAB
	Natruki Tomida	JP-KYOTO-U
	Andy White	US-UTA

Management Board Secretary	Gabriella Pugliese	IT-INFN.BA
Resources Coordinator	Fulvio Tessarotto	IT-INFN.TS
Deputy Resources Coordinator	Hans Taureg	DE-UBONN
Technical Coordinator	Florian Brunbauer	CH-CERN
EXSO	Yorgos Tsipolitis	GR-GSRIINTUA
Working Groups Coordinator	Beatrice Mandelli	CH-CERN
Work Packages Coordinator	Piotr Gasik	DE-GSI
Liaison Person with DRD2	Diego Gonzalez Diaz	ES-USC-IGFAE
Liaison Person with DRD4	Fulvio Tessarotto	IT-INFN.TS
Liaison Person with DRD5	Florian Maximilian Brunbauer	CH-CERN
Liaison Person with DRD6	Imad Laktineh	FR-ULYON1
Liaison Person with DRD7	Marco Bregant	BR-FAPESP-IFUSP
	Sorin Martoiu	RO-IFA-IFIN-HH

A reminder...

An important way to contribute

January 2026 – start of the next 2 years term for:

- SPs and CB Chair (elected) and CB Deputy Chair (appointed by CB Chair)

June 2026 (CB approval)– start of the next 2 years term for:

- Management Board Member (including 12 Tech. Rep. elected)
- Scientific Coordination Board Member

DRD1 Spokesperson will initiate discussion from Jan. 2026 and appointments proposal will be presented at the June CB.
MB member elections will be organized before June CB

Remembering Steve

Steve Biagi's Memorial session

09:00

Overview of Steve Biagi's scientific career

and introduction to the various speakers in this memorial

Speaker: Piet Verwilligen (INFN Bari)

09:10

Development of Modern Magboltz

Speaker: Heinrich Schindler

09:20

Steve Biagi's contributions to modeling low temperature plasmas (remote)

Speaker: Leanne Pitchford

09:50

When Porcini, Cappuccino, Golf, and Cross Sections Meet

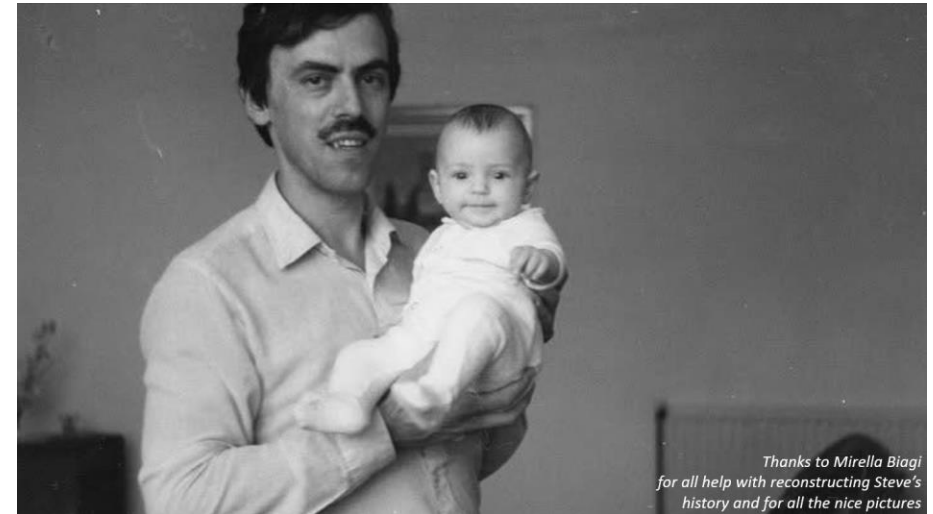
Steve's last years

Speaker: Marnik Metting van Rijn (ETH Zurich | High Voltage Laboratory)

10:20

Steve Biagi: Behind the scenes, ahead of his time!

Speaker: Archana Sharma



Thanks to Mirella Biagi
for all help with reconstructing Steve's
history and for all the nice pictures

Stephen Francis Biagi (1949-2025)



A dedicated mushroom hunter, golfer,
father, and an inspiring physicist.

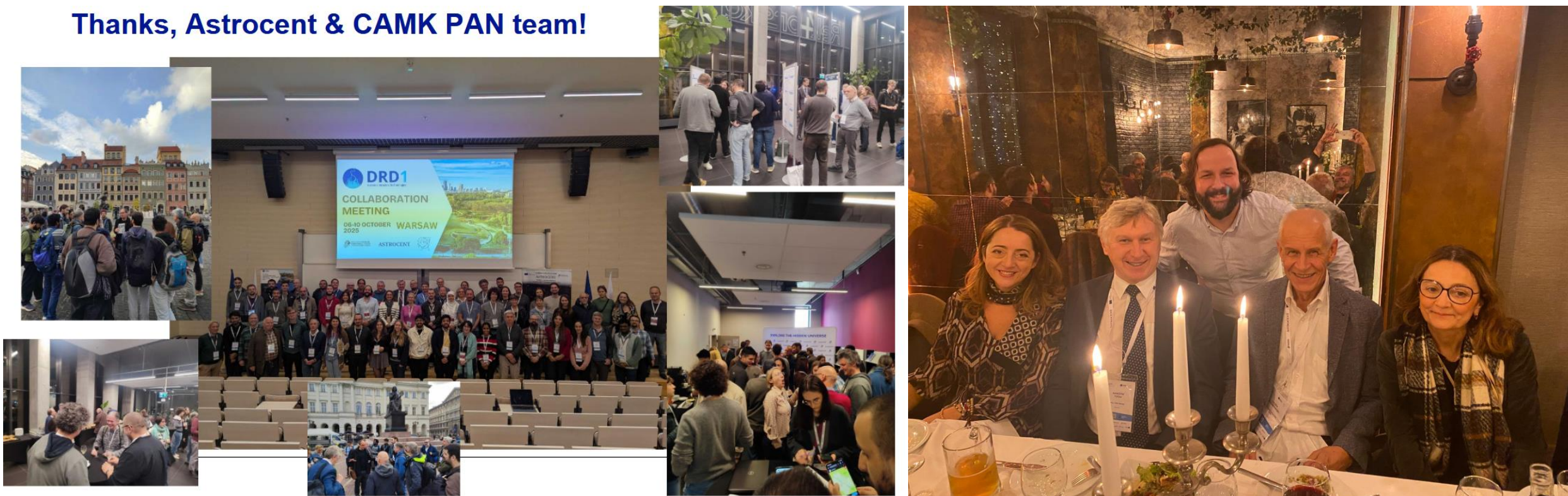
ETH zürich

22/22

<https://events.camk.edu.pl/event/124/sessions/265/#20251008>

and finally...

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