

RD51 Organizational issues

L. Ropelewski, M. Titov

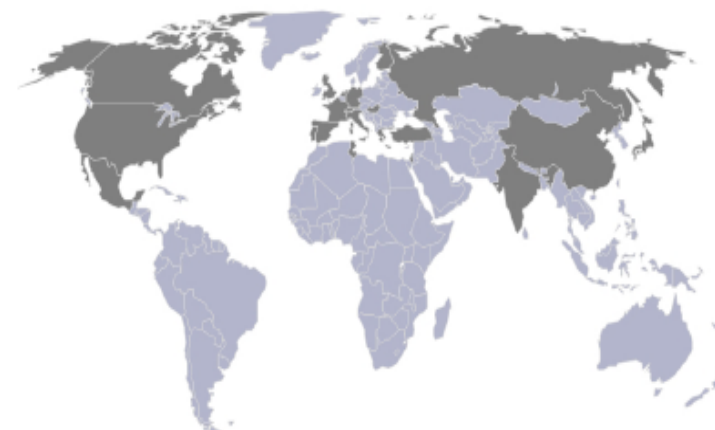
RD51 Collaboration Meeting @Crete, June 17 2009

**Conveners: please review
proposal tasks/timescales &
contributions of different institutes
into your WG activity**

R & D Proposal

Development of Micro-Pattern Gas Detectors Technologies

Editors: Matteo Alfonsi (CERN), Alain Bellerive (Carleton University), Amos Breskin (Weizmann Institute), Erik Van der Bij (CERN), Michael Campbell (CERN), Mar Capeans (CERN), Paul Colas (CEA Saclay), Silvia Dalla Torre (INFN Trieste), Klaus Desch (Bonn University), Ioannis Giomataris (CEA Saclay), Harry van der Graaf (NIKHEF), Lucie Linssen (CERN), Rui de Oliveira (CERN), Vladimir Peskov (St Etienne), Werner Riegler (CERN), Leszek Ropelewski (CERN), Fabio Sauli (TERA Foundation), Frank Simon (MPI Munchen), Hans Taureg (CERN), Maxim Titov (CEA Saclay), Andy White (University of Texas), Rob Veenhof (CERN)



CERN-LHCC-2008-011 / LHCC-P-001
21/08/2008



Task/Milestone Reference	Participating Institutes	Description	Deliverable Nature	Start/Delivery Date
WG1-1/Development of large-area Micro-Pattern Gas Detectors - Micromegas	CEA Saclay, Demokritos, Napoli, Bari, Athens Tech. U., Athens U., Lanzhou, Geneva, PNPI, Thessaloniki, Ottawa/Carleton	Development of large area Micromegas with segmented mesh and resistive anodes	First prototype (1x0.5m ²)	m1/m12
			SLHC full size	m13/m60
	CEA Saclay, Ottawa/Carleton Demokritos, Athens Tech. U., Athens U.		ILC full size	m13/m36
WG1-1/Development of large-area Micro-Pattern Gas Detectors - GEM	Bari, CERN, Pisa-Siena, Roma, Arlington, Melbourne, TERA, PNPI, MPI Munich, Argonne	R&D	Report, small size prototypes	m1/m18
	Bari, CERN, Pisa-Siena		Full scale prototype	m6/m18
			Development completed	m19/m30

RD51 Share Point

We encourage ALL RD51 members to use this forum for WG discussions

RD51 Collaboration

Welcome Maxim Titov



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Discussions

[Conveners Discussion](#)
[WG1: Technolcical Aspects and Development of New detector Structures](#)
[WG2: Common Characterization and Physics Issues](#)
[WG3: Applications](#)
[WG4: Simulations and Software Tools](#)
[WG5: MPGD Related Electronics](#)
[WG6: Production](#)
[WG7: Common Test Facilities](#)

MicroPattern Gas Detectors

<https://espace.cern.ch/test-RD51/default.aspx>

Announcements

Paris meeting agenda

09/10/2008 10:47 AM

by Leszek Ropelewski

2nd RD51 Collaboration Meeting from 13 October 15 October 2008

Monday 13 October 2008

13:30->14:00 Registration

14:00->16:00 Plenary Session - Opening and Reviews (Convener: Silvia Dalla Torre) (Amphitheatre)

14:00 Welcome...

RD51 meeting reminder

28/09/2008 10:53 PM

by Leszek Ropelewski

Dear Colleague,

The time of the RD51 Collaboration meeting is approaching. We are finalizing scientific program. You can find tentative agenda in the meeting web page under Timetable tab.

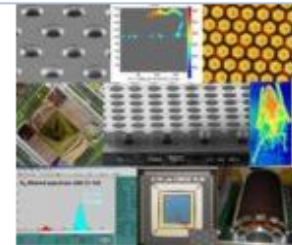
<http://indico.cern.ch/conferenceDisplay.py?confId=35172>

Message from LHCC chair person

27/09/2008 12:13 AM

by Leszek Ropelewski

MPGD R&D



Links

- 2nd RD51 Collaboration Meeting in Paris
- Meeting with LHCC referees
- 94th LHCC Meeting
- CERN Courier: NIKHEF meeting & RD51 info
- 1st RD51 Collaboration Workshop at NIKHEF
- MPGD R&D Workshop at CERN
- Old MPGD R&D page
- Old RD51 List of Institutes and Questionnaires
- CERN PH Faculty Meeting - MPGD R&D

[Add new link](#)

RD51 Notes

- **RD51 Note-2009-001: Supratik Mukhopadhyay et al.,**

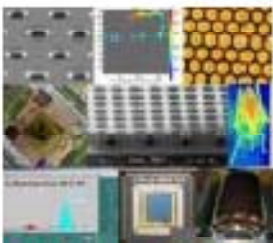
« neBEM: a Field Solver »

- **RD51 Note-2009-002: Mar Capeans et al.,**

« About aging of gas detectors: a compilation of some validation studies carried out for LHC »

We encourage all members to publish results of your work as RD51 Internal Notes or RD51 Public Notes (e.g. conference proceedings, etc.)

This will greatly facilitate exchange of information and improve RD51 internal documentation



RD51 in INDICO



[Home](#) > [Departments](#) > [PH](#) > [PH-EP](#) > [PH-DT](#) > [MPGD](#)

MPGD (Managers: Duarte Pinto, S.; Alfonsi, M.; Ropelewski, L.)

Micro Pattern Gas Detectors

Categories:

[RDS1](#) (103)
 [Others](#) (22)



[Home](#) > [Departments](#) > [PH](#) > [PH-EP](#) > [PH-DT](#) > [MPGD](#) > [RD51](#)

RD51 (Managers: Duarte Pinto, S.)

Categories:

[General](#) (41) **41 meetings**
 [Working Group 1](#) (49) **49 meetings**
 [Working Group 7 - Test Beam and Irradiation Facilities](#) (13) **13 meetings**

RD51 Public Collaboration Webpage

<http://rd51-public.web.cern.ch/RD51-Public/>

We encourage to reference this webpage to promote RD51 collaboration activities

■ Home ■ Organization ■ WG Activities ■ Meetings ■ Documents ■ Safety ■ Other Links

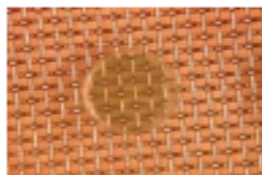
RD51 Collaboration

Development of Micro-Pattern Gas Detectors Technologies

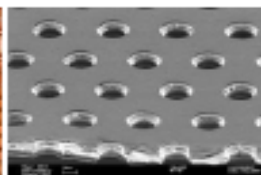
The proposed R&D collaboration, RD51, aims at facilitating the development of advanced gas-avalanche detector technologies and associated electronic-readout systems, for applications in basic and applied research. **The main objective of the R&D programme is to advance technological development and application of Micropattern Gas Detectors.**

The invention of Micro-Pattern Gas Detectors (MPGD), in particular the Gas Electron Multiplier (GEM), the Micro-Mesh Gaseous Structure (Micromegas), and more recently other micro pattern detector schemes, offers the potential to develop new gaseous detectors with unprecedented spatial resolution, high rate capability, large sensitive area, operational stability and radiation hardness. In some applications, requiring very large-area coverage with moderate spatial resolutions, more coarse Macro-patterned detectors, e.g. Thick-GEMs (THGEM) or patterned resistive-plate devices could offer an interesting and economic solution. The design of the new micro-pattern devices appears suitable for industrial production. In addition, the availability of highly integrated amplification and readout electronics allows for the design of gas-detector systems with channel densities comparable to that of modern silicon detectors. Modern wafer post-processing allows for the integration of gas-amplification structures directly on top of a pixelized readout chip. Thanks to these recent developments, particle detection through the *ionization of gas* has large fields of application in future particle, nuclear and astro-particle physics experiments with and without accelerators.

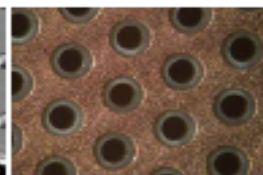
The RD51 collaboration involves ~ 350 authors, 59 Universities and Research Laboratories from 20 countries in Europe, America, Asia and Africa. All partners are already actively pursuing either basic- or application-oriented R&D involving a variety of MPGD concepts. The collaboration established common goals, like experimental and simulation tools, characterization concepts and methods, common infrastructures at test beams and irradiation facilities, and methods and infrastructures for MPGD production.



Micromegas



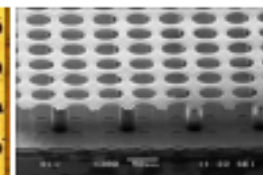
GEM



THGEM



MHSP



Ingrid

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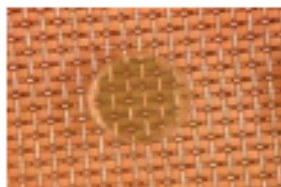
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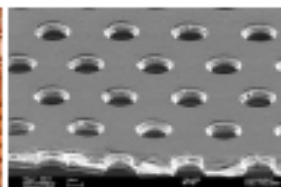
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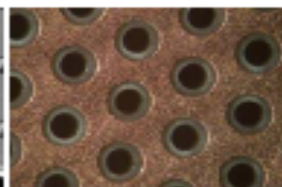
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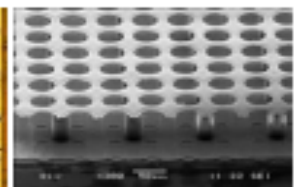
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WG
Conveners:

Please update
your public
WG webpages

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MPGD Training Session

(Feb. 16 – 20)

→ very well attended and a lot of positive feedback received

½(1)-day meeting of different

WG @ CERN between the RD51

Collaboration meetings →

will continue in the future

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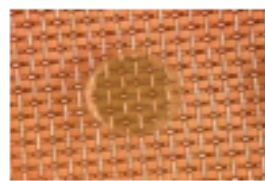
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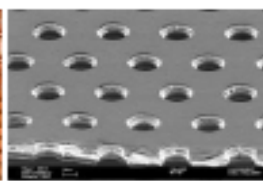
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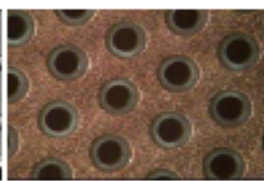
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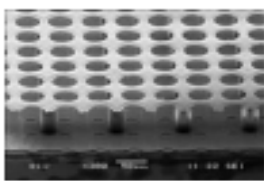
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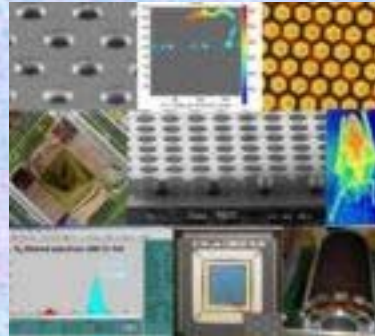
**Need an information from all RD51 members about the needs in the
MPGD technology and electronics for industrialization plans
(large volume production)**

<i>MPGD Technology / Detector & Experiment</i>	Total detector size	Timescale

Complimentary Development	Function Required	Timescale

RD51 Organizational Matters

RD51 Logo !



- **WG3: Applications survey (update) → please respond asap**
- **Next RD51 Collaboration Meeting (Oct. 19 – Oct. 21).**
Discussions about having 2 or 3 parallel session at a time.
Suggestions are welcome.
- **All RD51 participating institutes can register members as CERN Users (if not done so), get computer accounts etc.**