

CERN Globe (March 16, 17, 2015): 2nd RD51 Academia – Industry Matching Event “Special Workshop on Neutron Detection with MPGDs”

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Sincere gratitude to: Bruno Guerard, Richard Hall-Wilson, Fabrizio Murtas
 for the organization / coordination of the scientific program

Jean-Marie Le Goff and Antonio Pacheco for the CERN-HEPTech coordination

Academia-Industry Matching Event Special Workshop on Neutron Detection with MPGDs

14-15 October 2013
 CERN
 Europe/Zurich timezone

- Event Description
- Detailed agenda
- Registration
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- How to get CERN
- List of Recommended Hotels
- 12th RD51 Collaboration Meeting
- Organising Committee
- Photos



The specialized workshop "Neutron Detection with Micro-Pattern Gaseous Detectors" organised by RD51 in collaboration with HEPtech, will take place at CERN on October 14-15, 2013.

The goal of the workshop is to help disseminating MPGD technologies beyond fundamental physics, where academic institutions, potential users and industry could meet together.

The shortage of the Helium-3 in the world brings new challenges to neutron detection, especially in the areas of homeland security, non-proliferation, neutron scattering science and other fields. Micro-Pattern Gaseous Detectors offer attractive alternative solutions for neutron detection, compared to Helium-3 based proportional counters. Moreover, this event provides a platform for discuss prospects of the MPGD use for the thermal and fast neutron detection, commercial requirements and possible solutions. This workshop aims to foster collaboration between the particle physics community and the industry of neutron detectors, and to discuss the potential of the MPGD technologies for the field. This event is jointly organized by the RD51 collaboration, the HEPtech Network and CERN KT Group. It is open to all researchers and commercial partners interested or working in the field of neutron detection.

Dates: 14 PM to 15 AM October 2013
Venue: The Globe, CERN
 Route de Meyrin 385, 1217 Meyrin

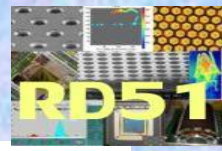
Academia-Industry Matching Event Second Special Workshop on Neutron Detection with MPGDs

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RD51 Collaboration Activities (beyond 2013)



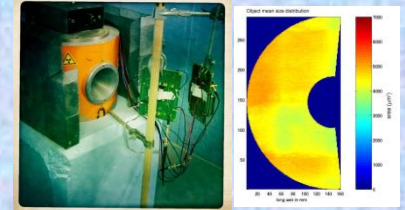
Large Area Detectors
Assembly Optimization



WG1:



Common Projects
Generic R&D, QA
Long Term Stability



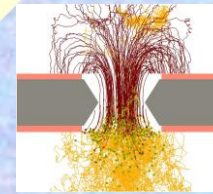
WG5:

MPGD
Electronics



WG4:

Software Tools
and
Simulations



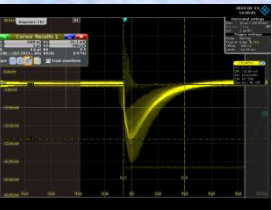
WG3/NEW WG:

- Conferences / Schools
- Academia-Industry Matching Events

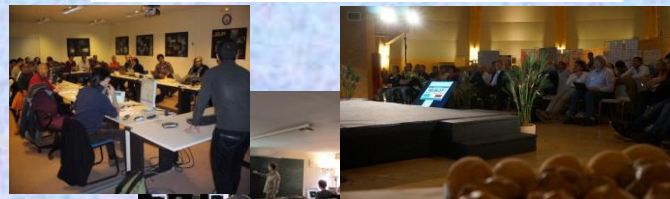
WG6:



CERN MPGD
Workshop,
Quality Control
and
Industrialization



RF
Test
Fab



WG3 (NEW): Applications - Organization of series of specialized workshops
disseminating MPGD applications beyond fundamental physics - RD51, potential users and industry (e.g. dosimetry, neutron detection, medical physics, ...)

WG3: 14-15 October 2013: 1st RD51 Academia – Industry Matching Event

“Special Workshop on Neutron Detection with MPGDs”



Research + industry + potential users focused on dedicated applications

91 participants, 26 presentations: <https://indico.cern.ch/conferenceDisplay.py?confId=265187>

WG3: 14-15 October 2013: 1st RD51 Academia – Industry Matching Event

“Special Workshop on Neutron Detection with MPGDs”

RD51-NOTE-2014-003

arXiv:1410.0107

Prospects in MPGDs development for neutron detection

Bruno Guerard (ILL), Richard Hall-Wilton (ESS), Fabrizio Murtas (INFN & CERN)

Summary based on presentations during RD51

Accademia-Industry Matching Event, CERN October 14-15, 2013

RD51-NOTE-2014-003



➤ MPGDs might contribute significantly to the development of neutron scientific instrumentation

➤ Evaluate the prospects of neutron MPGDs → discuss applications which would benefit from a gain in performance, and if they could offer a competitive alternative to conventional ³He detectors

➤ Goal was to help disseminating MPGD technologies beyond HEP, and to give the possibility to academic institutions, potential users and industry to meet together.

Instrument	Detector Technology						
	¹⁰ B Thin Films		Scintillators		³ He	Micropattern	
	⊥		WLS	Anger		Rate	Resolution
Multi-Purpose Imaging	-	-	-	-	-	o	+
General Purpose Polarised SANS	o	+	-	+	o	+	-
Broad-Band Small-Sample SANS	o	+	-	+	-	+	-
Surface Scattering	o	+	-	+	o	+	-
Horizontal Reflectometer	-	o	-	+	+	o	-
Vertical Reflectometer	-	o	-	+	+	o	-
Thermal Powder Diffractometer	o	+	+	-	-	o	-
Bi-Spectral Powder Diffractometer	o	+	+	-	-	o	-
P-M Powder Diffractometer	o	+	+	-	-	o	-
MS Engineering Diffractometer	o	+	+	-	-	o	-
Extreme Conditions Diffractometer	o	+	+	-	-	o	-
Single Crystal Diffractometer	o	+	+	-	-	o	-
Macromolecular Diffractometer	-	o	o	o	-	+	+
Cold Chopper Spectrometer	+	o	o	-	-	-	-
Bi-Spectral Chopper Spectrometer	+	+	o	-	-	-	-
Thermal Chopper Spectrometer	+	+	+	-	-	-	-
Cold Crystal Analyser Spectrometer	-	o	-	+	+	-	-
Vibrational Spectrometer	-	o	-	o	+	-	-
Backscattering Spectrometer	-	o	-	+	+	-	-
High-Resolution Spin Echo	-	o	-	o	+	+	-
Wide-Angle Spin Echo	-	o	-	o	+	+	-
Fundamental & Particle Physics	-	-	-	-	+	+	+

WG3: 16-17 March 2015: 2nd RD51 Academia – Industry Matching Event “Special Workshop on Neutron Detection with MPGDs”

Academia-Industry Matching Event
Second Special Workshop on Neutron Detection with MPGDs

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indico.cern.ch

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- ❖ 16 Presentations
- ❖ CERN-KT report
- ❖ 5 Industrial Partners
- ❖ Round Table Discussion

<https://indico.cern.ch/event/365840/other-view?view=standard>