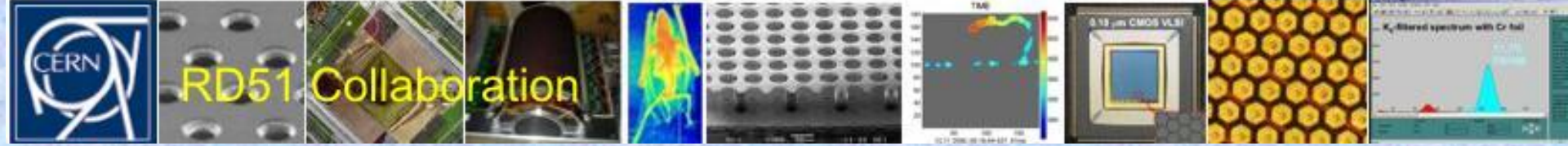


RD 51 Collaboration News

Leszek Ropelewski (CERN), Maxim Titov (CEA Saclay)

79 RD51 Member Institutes; ~ 450 Participants

RD51 Collaboration Mini-Week, CERN, November 21-23, 2011

Thank you, Japan, for bringing us together and for the wonderful time !

RD51 Mini-Week Meeting (CERN, November 21-23, 2011):
https://indico.cern.ch/conferenceDisplay.py?confId=158402

- **Monday, November 21** (IT auditorium room, 31-3-004)
  - 14:00 - 15:00 Opening session
  - 15:00 - 18:30 WG2 - Physics issues

- **Tuesday, November 22**
  - 09:00-12:30 WG6 - Production (IT auditorium room, 31-3-004)
  - 09:00-12:00 WG7 - Test beam (160-1-009)
  - 14:00-19:00 WG1 - Technologies & new str. (IT auditorium room, 31-3-004)
  - 14:00-16:00 WG5 - Electronics (160-1-009)

- **Wednesday, November 23**
  - 09:00-12:30 WG5 - Electronics (IT auditorium room, 31-3-004)
  - 14:00-19:00 WG4 - Simulation & software (13-2-005)

Very full agenda – a lot of contributions – have to schedule WG parallel sessions during the mini-week (for the first time)

Report from the RD51 Referee (CERN/LHCC 2011-004 Rev)

105th LHCC Meeting AGENDA OPEN Session (23-24 March 2011)

The Committee heard a report on RD51 regarding the development of advanced gas-avalanche Micro-Pattern Gas Detector (MPGD) technologies and associated read-out systems for applications in basic and applied research. The proposal is to develop techniques for such detectors so they can be capable of coping with high-flux rates while also improving the needed space-point resolution and the radiation hardness of the detectors.

The Committee took note of the good progress in the study of such devices during 2010. **The RD51 research programme in 2010 concentrated on the R&D, characterization, applications, software and simulations, development of electronics, production and beam tests on large-area MICROMEGAS, Gas Electron Multiplier (GEM), and Thick-GEM detectors. A number of major achievements were reported for 2010, including a) the construction of large-area MPGDs with 1 m2 unit size, which could be used potentially for the ATLAS and CMS Muon System upgrades; b) the successful completion of the first RD51 Common Project (Scalable Read-out System); c) progress with the upgrade of the CERN MPGD workshop; d) major improvements to the MPGD simulation software in the domain of small-scale structures and e) first steps towards industrialization of the GEM and MICROMEGAS technologies.**

The RD51 research plan for 2011 consists of R&D on large-area detectors and new MPGD technologies development. The LHCC considers that the proposed work plan for 2011 to be reasonable. The LHCC also took note of the request for continued access to CERN facilities and infrastructure (irradiation areas and test beams; the printed-circuit workshop; the Silicon Bonding Workshop; access to central computing resources and Grid for MPGD simulations; and office space).

In view of the above and given the modest request for resources for further work, the referee recommends that the RD51 R&D project be continued in 2011. A status report is expected to be submitted to the LHCC in one year's time. The Committee agrees to the continuation of the project on this basis.

RD51 Collaboration: CERN Research Board Statement

CERN RESEARCH BOARD (CERN/DG/ Research Board 2011-421)
Minutes-196 June 2011

E. Elsen reported on the activities of the **RD** collaborations. RD39 is investigating solid state detectors at low temperature. Objects under study are the 3D trenched Charge Injection Devices (CID). RD42 is working with radiation-hard diamond detectors. They are installing CVD detectors for the characterization of the sCVD and pCVD variants. Substrates under study by RD50 will be used for radiation-hard silicon detectors. New tools called Edge Transient Current Techniques are being developed. **RD51 is building large area gas detectors**. The present technology is based on the Micro Pattern Gas Detector (MPGD). **The Research Board endorsed the continuation of these RD projects, and encourages their work towards applications useful for the upgrades of the LHC experiments.**

Election of Spokespersons, CB Chair

- Electronic election (results announced in Kobe, Japan)
  - R.Martens / CERN acted as polling officer
  - 27 institutes cast a vote (participation 35.06%)

function	Name of candidate	votes
CB Chair	Sylvia Dalla Torre	26
Spokesperson	Leszek Ropelewski	27
Spokesperson	Maxim Titov	25

RD51 Collaboration Meetings and Mini-Weeks in 2012

- **20 – 22 February: RD51 Collaboration Meeting @ CERN**
- **Next report to the LHCC Committee is due in March**
- **RD51 Mini-Weeks (possibly in - May/June and December) @ CERN**
- **Two Proposals to hold second RD51 Collaboration Meeting outside CERN (possibly in October):**

Today's Presentations:

- **Proposal for 2012 RD51 collaboration meeting in Stony Brook (K. Dehmelt)**
- **Proposal for 2012 RD51 collaboration meeting in Kolkata (S. Mukhopadhyay)**

RD51 Collaboration Meeting outside CERN
→ Decision will be taken before the end of 2011

Selection and Evaluation of the RD51 Common Projects

4 proposals received under the call for Project Funding from the RD51 Common Fund:

- **Thin and high-pitch laser-etched mesh manufacturing and bulking** *(Saclay / CERN / Bari)*
- **Development of innovative resistive GEM alpha detectors for earthquakes prediction and homeland security** *(INFN Bari / UNAM, Mexico / INFN Padova / INFN Frascati)*
- **MPGDs technology laboratory for training, development, fabrication, applications and innovation** *(Universidad Antonio Nariño, Columbia / Brookhaven National Laboratory/ Helsinki Institute of Physics / HEPTech / GSI Helmholtzzentrum)*
- **A low mass microbulk with real XY strips structure** (*NCSR Demokritos / Saclay/ Laboratorio de Física Nuclear y Astropartículas, Universidad de Zaragoza / CERN*)

All proposals are of a high quality:

→ **MB will meet this week to make recommendation;**
→ **CB/MB discussions & final selection in November/December;**
→ **Final decision by the end of the year**

RD51 Collaboration Notes

https://espace.cern.ch/test-RD51/RD51%20internal%20notes/Forms/AllItems.aspx

RD51 INTERNAL NOTES

2011

RD51-Note-2011-013 – "Test beam results of the GE1/1 prototype for a future upgrade of the CMS high-eta muon system" (by D. Abbaneo, M. Abbrescia, C. Armagnaud, P. Aspell, Y. Ban, S. Bally, L. Benussi, U. Berzano, S. Bianco, J. Bos, K. Bunkowski, J. Cai, J. P. Chatelain, J. Christiansen, S. Colafranceschi, A. Colaleo, A. Conde Garcia, E. David, G. de Robertis, R. De Oliveira, S. Duarte Pinto, S. Ferry, F. Formenti, L. Franconi, K. Gnanvo, A. Gutierrez, M. Hohlmann, P. E. Karchin, F. Loddo, G. Magazzu, M. Maggi, A. Marchioro, A. Marinov, K. Mehta, ,J. Merlin, A. Mohapatra, T. Moulik, M. V. Nemallapudi, S. Nuzzo, E. Oliveri, D. Piccolo, H. Postema, G. Raffone, A. Rodrigues, L. Ropelewski, G. Saviano, A. Sharma, M. J. Staib, H. Teng, M. Tytgat, S. A. Tupputi, N. Turini, N. Smilkjovic, M. Villa, N. Zaganidis, M. Zientek)

RD51-Note-2011-012 – "Construction and Performance of Large-Area Triple-GEM Prototypes for Future Upgrades of the CMS Forward Muon System" (by M. Tytgat, A. Marinov, N. Zaganidis, Y. Ban, J. Cai, H. Teng, A. Mohapatra, T. Moulik, M. Abbrescia, A. Colaleo, G. de Robertis, F. Loddo, M. Maggi, S. Nuzzo, S. A. Tupputi, L. Benussi, S. Bianco, S. Colafranceschi, D. Piccolo, G. Raffone, G. Saviano, G. Magazzu, E. Olivieri, N. Turini, T. Fruboes, D. Abbaneo, C. Armagnaud, P. Aspell, S. Bally, U. Berzano, J. Bos, K. Bunkowski, J. P. Chatelain, J. Christiansen, A. Conde Garcia, E. David, R. De Oliveira, S. Duarte Pinto, S. Ferry, F. Formenti, L. Franconi, A. Marchioro, K. Mehta, J. Merlin, M. V. Nemallapudi, H. Postema, A. Rodrigues, L. Ropelewski, A. Sharma, N. Smilkjovic, M. Villa, M. Zientek, A. Gutierrez, P. E. Karchin, K. Gnanvo, M. Hohlmann, M. J. Staib)

RD51-Note-2011-011 – "A Slow Control System for RD51 Test Facilities", (by K. Karakostas, T. Alexopoulos, G. Tsipolitis)

RD51-Note-2011-010 – "Signal propagation and spark mitigation in resistive strips read-outs" (by J. Galan)

RD51-Note-2011-009 – "Innovative designs of resistive microstrip gaseous detectors (R-MSGCs)" (by P. Martinengo, E. Nappi, R. Oliveira, V. Peskov, P. Pietropaolo, P. Picchi)

RD51-Note-2011-008 – "An improved design of spark-protected microstrip gas counters (R-MSGC)" (by R. Oliveira, V. Peskov, F. Pietropaolo, P.Picchi)

RD51-Note-2011-007 – "First observation of Cherenkov rings with a large area CsI-TGEM-based RICH prototype" (by V. Peskov, G. Bencze, A. Di Mauro, P. Martinengo, D. Mayani, L. Molnar, E. Nappi, G. Paic, N. Smirnov, H. Anand, I. Shukla)

RD51-Note-2011-006 - "On the low-temperature performances of THGEM and THGEM/G-APD multipliers in gaseous and twophase Xe" (by A. Bondar, A. Buzulutskov, A. Grebenuk, E. Shemyakina, A. Sokolov, D. Akimov, I. Alexandrov and A. Breskin)

RD51-Note-2011-005 –" Modelling of avalanches and streamers by finite elements with COMSOL: step-by-step guide", Notes for the RD51 Simulation School, CERN, Jan. 19-21 2011, (by P. Fonte)

RD51-Note-2011-004 –"Thermal Stretching of Large-Area GEM Foils Using an Infrared Heating Method" (by Michael Staib, Bryant Benson, Kondo Gnanvo, Marcus Hohlmann, Amilkar Quintero)

RD51-Note-2011-003 –"On the operation of a Micropattern Gaseous UV Photomultiplier in Liquid-Xenon" (by S. Duval, A. Breskin, R. Budnik, W.T. Chen, H. Carduner, M. Cortesi, J.P. Cussonneau , J. Donnard, J. Lamblin, P. Le Ray, E. Morteau, T. Oger, J.S. Stutzmann and D. Thers)

RD51-Note-2011-002 –"Infrared scintillation yield in gaseous and liquid argon for rare-event experiments" (by A. Buzulutskov, A. Bondar, A. Grebenuk)

RD51-Note-2011-001 - "Further Developments and Tests of Microstrip Gas Counters with Resistive Electrodes" (by R. Oliveira, V. Peskov, Pietropaolo, P.Picchi).

2010

RD51-Note-2010-009 – "Gas Flow Simulations for gaseous detectors" (by D. Abbaneo, S. Bally, H. Postema, A. Conde Garcia, J. P. Chatelain, G. Faber, L. Ropelewski, S. Duarte Pinto, G. Croci, M. Alfonsi, M. Van Stenis, A. Sharma, L. Benussi, S. Bianco, S. Colafranceschi, F. Fabbri, L. Passamonti, D. Piccolo, D. Pierluigi, A. Russo, G. Saviano, A. Marinov, N. Zaganidis, N. Turini, E. Oliveri, G. Magazzu, Y. Ban, H. Teng, J. Cai)

RD51-Note-2010-008 – "Construction of the first full-size GEM-based prototype for the CMS high-eta muon system" (by D. Abbaneo, S. Bally, H. Postema, A. Conde Garcia, J. P. Chatelain, G. Faber, L. Ropelewski, S. Duarte Pinto, G. Croci, M. Alfonsi, M. Van Stenis, A. Sharma, L. Benussi, S. Bianco, S. Colafranceschi, F. Fabbri, L. Passamonti, D. Piccolo, D. Pierluigi, G. Raffone, A. Russo, G. Saviano, A. Marinov, M. Tytgat, N. Zaganidis, M. Hohlmann, K. Gnanvo, M.G. Bagliesi, R. Cecchi, N. Turini, E. Oliveri, G. Magazz`u, Y. Ban, H. Teng, J. Cai)

RD51-Note-2010-007 – "First tests of "bulk" MICROMEGAS with resistive cathode mesh" (by R. Oliveira, V. Peskov, Pietropaolo, P.Picchi)

RD51-Note-2010-006 – "A spark-resistant bulk-micromegas chamber for high-rate applications" (by T. Alexopoulos, J. Burnens, R. de Oliveira, G. Glonti, O. Pizzirusso, V. Polychronakos, G. Sekhniaidze, G. Tsipolitis, J. Wotschack)

RD51-Note-2010-005 – "Characterization of GEM Detectors for Application in the CMS Muon Detection System" (by D. Abbaneo, S. Bally, H. Postema, A. Conde Garcia, J. P. Chatelain, G. Faber, L. Ropelewski, E. David, S. Duarte Pinto, G. Croci, M. Alfonsi, M. van Stenis, A. Sharma, L. Benussi, S. Bianco, S. Colafranceschi, D. Piccolo, G. Saviano, N. Turini, E. Oliveri, G. Magazzu', A. Marinov, M. Tytgat*, N. Zaganidis, M. Hohlmann, K. Gnanvo, Y. Ban, H. Teng, J. Cai)

RD51-Note-2010-004 - "Detection and Imaging of High-Z Materials with a Muon Tomography Station Using GEM Detectors" (by K. Gnanvo, B. Benson, W. Bittner, F. Costa, L. Grasso, M. Hohlmann, J.B. Locke, S. Martoiu, H. Muller, and M. Staib)

RD51-Note-2010-003 - "Further evaluation of a THGEM UV-photon detector for RICH and comparison with MWPC" (by V. Peskov, M. Cortesi, R. Chechik and A. Breskin)

RD51-Note-2010-002 - "Imaging of high-Z material for nuclear contraband detection with a minimal prototype of a Muon Tomography station based on GEM detectors" (by Kondo Gnanvo, Leonard V. Grasso III, Marcus Hohlmann, Judson B. Locke, Amilkar S. Quintero, Debasis Mitra)

RD51-Note-2010-001 - "First Tests of MICROMEGAS and GEM-like Detectors Made of a Resistive Mesh" (by R. Oliveira, V. Peskov, F. Pietropaolo, P. Picchi)

We encourage everybody to submit results of your work (before journal publication) and internal documentation as RD51 internal notes

Recent / Future MPGD / RD51 Seminars

CERN Detector Seminars:

- S. Dalla Torre, « Novel photon detectors based on ThickGEM technology for COMPASS RICH-1", (Jul. 15, 2011), http://indico.cern.ch/conferenceDisplay.py?confId=145264

- J. Wotschack, « Development of spark-resistant large-area micromegas detectors for the ATLAS upgrade" (Nov. 18, 2011), https://indico.cern.ch/conferenceDisplay.py?confId=149008

- A. Sharma, "Triple-GEM studies for future upgrade of the CMS forward muon system" (Dec. 16, 2011), https://indico.cern.ch/conferenceDisplay.py?confId=159247

All-Russian Seminar RDMS/CMS (ОИЯИ (Дубна), ФИАН (Москва), ИЯИ (Москва), ПИЯФ (Гатчина), ЦЕРН (354-1-019), ТГУ (Томск), КГУ (Кемерово), ОГУ (Омск), НГТУ (Новосибирск), ЯрГУ (Ярославль)):

- M. Titov, "Development of Micro-Pattern Gas Detector Technologies" (Nov. 9, 2011), http://www.desy.de/~titov/RD51_CMS_RDMS

We encourage RD51 collaboration members to organize MPGD seminars in your laboratory/country

Dec. 2011: MPGD-Related Events

➢ Saclay Workshop on Micromegas Activities (Dec. 6-8, 2011): Preliminary Agenda

HORAIRES	MARDI 6/12	HORAIRES	MERCREDI 7/12	HORAIRES	JEUDI 8/12
9h00 9h15	Workshop Wwelcome (TBD)	9h00 9h30	Une TPC Micromegas pour l'ILC (P. Colas)	9h00 9h25	Micro-bulk (F. Iguaz Gitierrez)
9h15 9h45	Review of the 2011 MPGD Conference - Linking MPGD Technology to Physics (M. Titov)	9h30 10h00	ILC/DHCAL Micromegas (LAPP Annecy,TBC)	9h25 9h45	Peggy Pack (I. Giomataris)
9h45 10h10	SLHC/ATLAS Physics (Ph Schune)	10h00 10h30	HARPO (D. Bernard)	9h45 10h05	Luminescence (L Segui Iglesias)
10h10 10h40	SLHC/ ATLAS Detectors (F. Jeanneau)	10h30 11h00	CAST (E. Ferrer-Ribas)	10h05 10h30	Liquid Argon TPC micromegas readout (TBD)
10h40 11h00	PAUSE CAFE	11h00 11h20	PAUSE CAFE	10h30 10h55	The SPLAM project: development of large size Micromegas detectors for particle detection at high flux (D. Neyret)
11h 11h30	Pixelized Micromegas detector with low discharge rate for the COMPASS experiment (D. Neyret)	11h20 11h45	Sphère - SEDINE (G. Gerbier or I. Giomataris)	10h55 11h15	PAUSE CAFE
11h30 11h55	T2K Physics (E. Mazzucato)	11h45 12h15	GANIL activities (J. Pancin)	11h15 11h45	R&D studies with resistive strip micromegas read-outs (J. Galan Lacarra)
11h55 12h25	T2K/TPC detector (G. Vasseur)	12h15 12h40	Saragoza University activities (Saragoza University, TBD)	11h45 12h15	The GridPix detector: status production, DAQ and software, and future R&D for improvements (H. Van der Graaf, NIKHEF)
12h25 12h50	CLAS12 Physics (S. Procureur)	12h40 14h00	REPAS	12h15 12h45	Développements des détecteurs Micropixel (D. Attié)
12H50 14h00	REPAS	14h00 14h30	CERN workshop (Rui de Oliveira, CERN,TBC)	12H45 14h00	REPAS
14h00 14h30	CLAS12 detectors (S. Aune)	14h30 14h55	Saclay Workshop (S. Aune or M. Anfreville)	14h00	Discussion - débat (TBD)
14h30 15h00	MIMAC experiment (O. Guillaudin, LPC Grenoble)	14h55 15h25	Propriété intellectuelle et valorisation (S. Zaninotti)		
15h00 15h25	MIMAC micromegas detectors (E. Ferrer-Ribas)	15h25 15h45	PAUSE CAFE		
15h25 15h50	Readout Electronics: AFTER, GET, DREAM, APV (TBC)	15h45 16h15	FORFIRE (T. Papaevangelou)	16h30	
15h50 16h10	PAUSE CAFE	16h15 16h45	The use of MicroMegas-based neutron detectors at the n_TOF facility at CERN (F. Belloni)		
16h10 16h40	ACTAR TPCs (E. Pollacco) TBC for 8/12	16h45 17h00	LLB neutron detector (A. Delbart)		
16h40 17h10	MINOS: a new vertex tracker for in-flight gamma-ray spectroscopy (L. Audirac)	17h00 17h15	Chinese neutron detector (W. Wang)		
17h10 17h40	FIDIAS/TPC Fission (S. Panebianco)	17h15 17h45	DEMIN - R3B (Ph. Legou)		

➢ Workshop on GridPix production at MESA+ (Univ. Twente, Dec. 14, 2011)

→ see Harry van der Graaf presentation

Feb. 2012: EDIT School in Fermilab

Agreed with EDIT 2012 Organizers to have 3 MPGD Setups:

- **GEM**
- **Micromegas**
- **InGrid (H. van der Graaf)**

If you are interested to participate in the school organization and bring/set up your MPGD detector at the EDIT'2012

→ Please let us know

WG4 - Avalanche Simulation in Single GEM

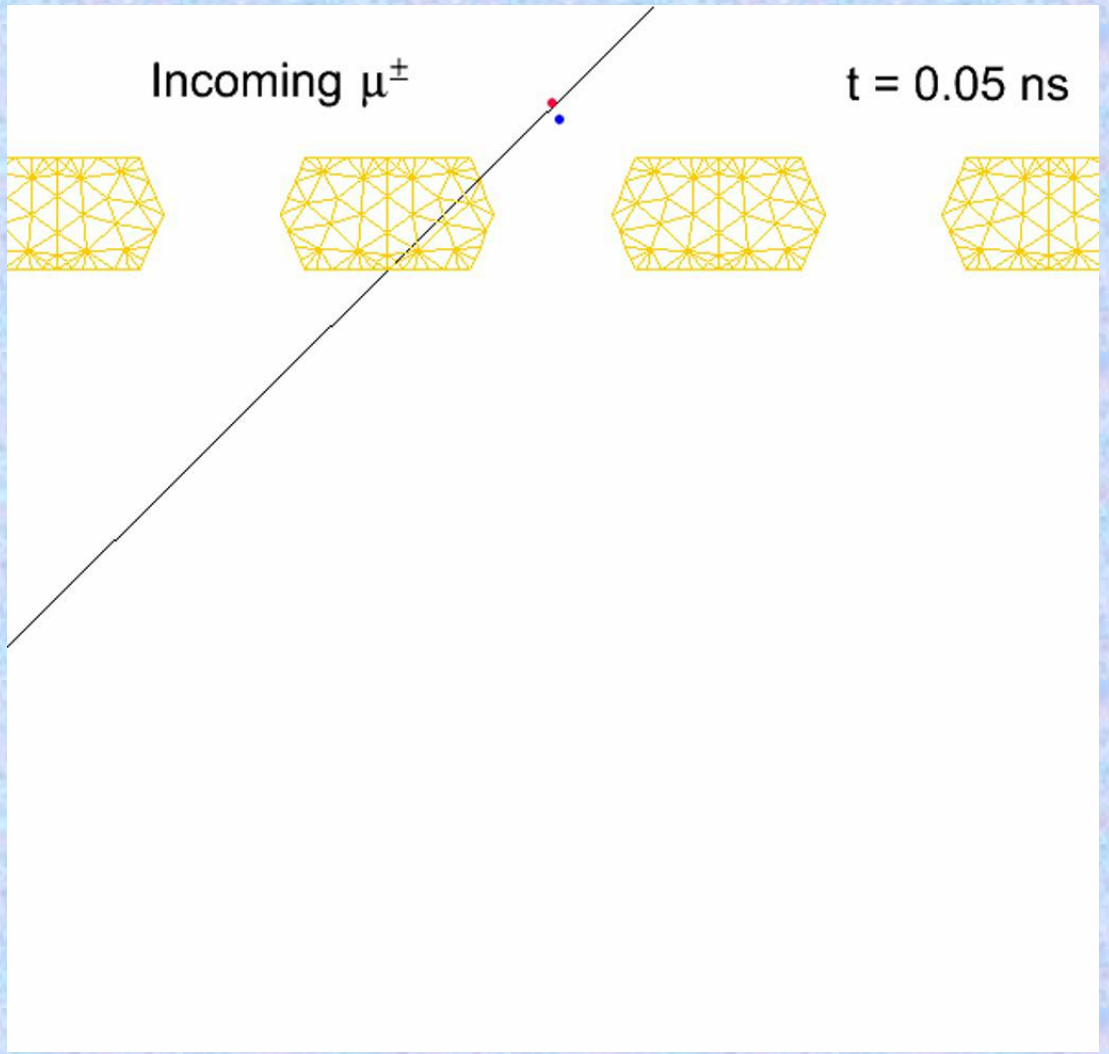
- Animation of the avalanche process (electrons are blue, ions are red, the mesh is orange)
- Simulation → monitor (in real-time) ion drifting and ion losses at the upper metal

Developed within the framework of the RD51 WG Software Activities:

Courtesy: Sven Dildick, Heinrich Schindler,

Objectives: understanding the gain in standard GEM

- ANSYS: model & mesh the GEM
- Magboltz 8.9.6: relevant cross sections of electron-matter interactions
- Garfeld++: simulate electron avalanches



WG4 Software, November 23 (14:00 - 19:00)

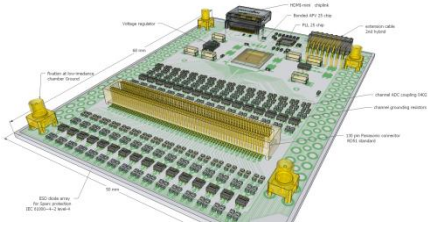
http://garfieldpp.web.cern.ch/garfieldpp/examples/gemgain

WG5– Electronics & Scalable Readout Systems

WG5: 1-day meeting: November 22 (14:00-18:00) & Wednesday, November 23 (09:00-12:30)

CERN experiments

- ATLAS CSC upgrade MMegas (5kCH- APV -SRS systems for testbeams delivered, MMDAQ)
- ATLAS CSC upgrade Mmegas, (BNL chip readout via SRS, SRS Adapter by Arizona Univ under test)
- ALICE EMCaL , SRU-based readout backend (25 SRU for ALICE EMCaL upgrade, ongoing collaboration)
- NA62 ref. tracker with Micro-Megas (1kCH-SRS Minicrate delivered, MMDAQ)
- CMS high Eta, VFAT hybrid and VFAT SRS adapter design started, manpower needed



APV hybrid 128ch

HEP experiments

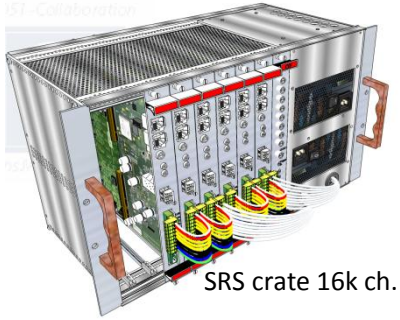
- NEXT Coll., dual Beta decay, SiPM, PM (Coll. on SRS hardware, FEC cards delivd, DATE)
- BUDKER,INP,Deuteron,triple-GEM
- BNL GEM detector readout (2kCH. APV Minicrate delvd. PHENIX DAQ port to SRS)
- Jeff. Lab Virginia Univ. GEM prototyping, 1kCh APV Minicrate delivered, DATE (Kondo)

Applications with Cosmic Tomography

- FIT Florida, Muon Tompography for homeland security, GEMs (16 kCh full SRS Crate delivered, DATE)
- Geoscienes CRNS- Waterquality, MMegas (5kCh SRS Crate delivered, DATE , Labview)

R&D with MPGD's (small systems)

- Tsinghua Univ, GEM Imaging
- Bonn/Mainz Univ, Timepix readout (starting Nov. 2011 , 1 FEC /ADC combo)
- Helsinki HIP, GEM-MMega eval. (2kCh SRS Crate delivered)
- MEXICO UNAM, THGEM (500ch SRS Minicrate delivered , DATE)
- C.E. Saclay, Micromegas (2k Ch SRS Minicrate delivered, MMDAQ)



SRS crate 16k ch.

New orders (commercial SRS)*

- RD51 lab, WIS, USTC, SAHA, INFN Bari, INFN Napoli, Radcore, Stony Brook, UPV Valencia, ATLAs upgrade + more

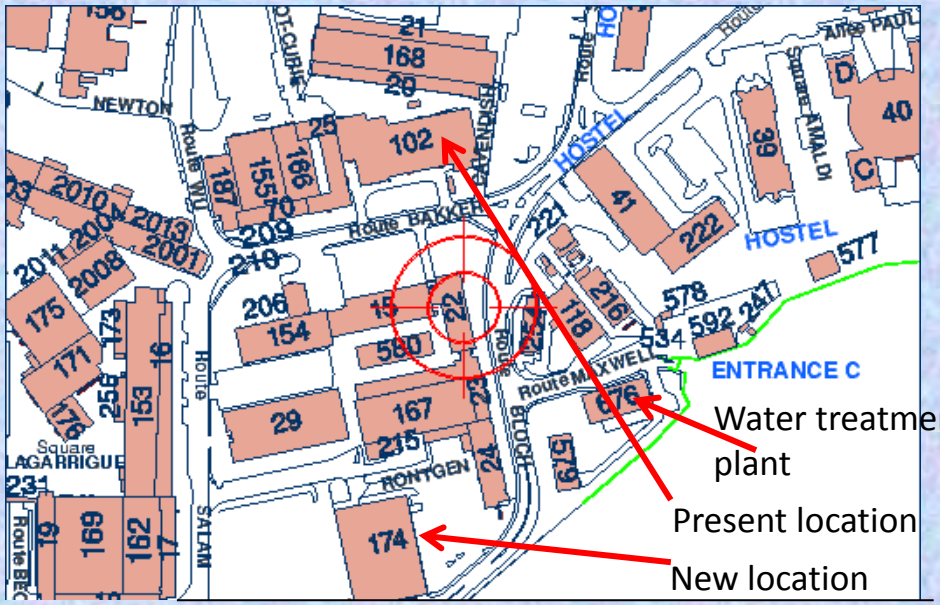
* **SRS Production 2012 (commercial):** PRISMA, Alexandoupulis Gr, sales via CERN store, CERN contract KTT in prep. (250 Ch SRS Minicrate delivd. as Ref. System, Labview*

WG6 – TE / MPE / EM Workshop Upgrade

- **In 2010 agreement was reached with CERN management to purchase the subset of machines necessary to carry out R&D on large size GEM (2m x 0.5 m) & Micromegas (2m x 1m) and the associated large size read-out boards in the current CERN TE/MPE/ME facility.**

	market survey	call for tender	order	received	ready
GEM					
– 1 continuous polyimide etcher	x	x	x	x	11/2011
– 1 Cu electro-etch line	x	x	x	x	x
– 1 stripping line	x	x	x	x	x
Micromegas					
– 1 large laminator	x	x	x	x	x
– 1 large Cu etcher	x	x	x		01/2012
– 1 large UV exposure unit	x	x	x	x	09/2011
– 1 large resist developer	x	x	x		01/2012
– 1 large resist stripper	x	x	x		01/2012
– 1 large oven	x	x	x	x	x
– 1 large dryer	x	x	x	x	x

New TE / MPE / EM Workshop Building 107



Start of the construction : beginning 2012

Completion: October 2013

CERN Building 107
Basis of Design

WG6 – MPGD Technology & Industrial Partners

THGEM Technology – ELTOS S.p.A. (Italy)
PRINT ELECTRONICS (Israel)

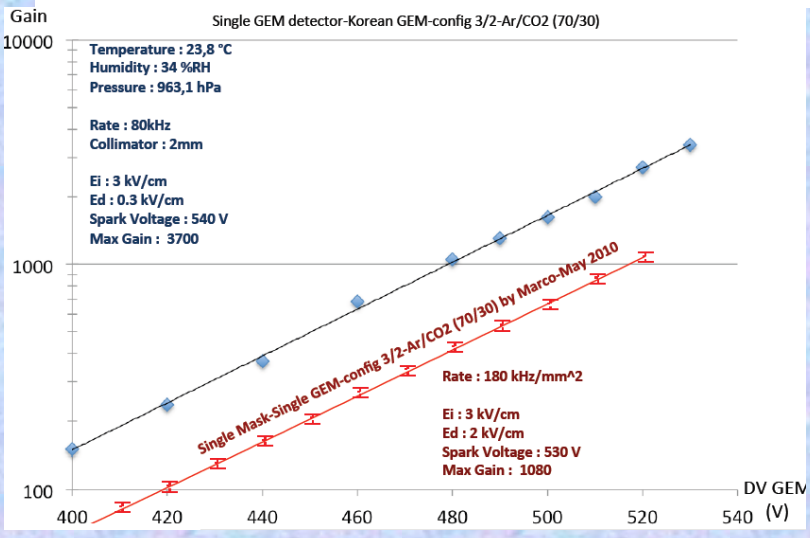
GEM Technology

- New Flex (Korea, Seoul)
- Tech-ETCH (USA, Boston)
- Scienergy (Japan, Tokyo)
- Keerthi Industries (India)
- MicroMetal GmbN (germany, Muellheim)

Micromegas Technology

- TRIANGLE LABS (USA, Nevada)
- ELTOS S.p.A. (Italy)
- SOMACIS (Italy, Castelfidarco)
- CIREA (France, CHOLET)

Industrial test runs for each technology foreseen in 2011/2012 after selection of the best candidates



New Flex Facilities and the first evaluation GEM foils produced there

WG6 – MPGD Technology & Industrial Partners

THGEM Technology – ELTOS S.p.A. (Italy)
PRINT ELECTRONICS (Israel)

GEM Technology
- New Flex (Korea, Seoul)
- Tech-ETCH (USA, Boston)
- Scienergy (Japan, Tokyo)
- Keerthi Industries (India)
- MicroMetal GmbN (germany, Muellheim)

Micromegas Technology
- TRIANGLE LABS (USA, Nevada)
- ELTOS S.p.A. (Italy)
- SOMACIS (Italy, Castelfidarco)
- CIREA (France, CHOLET)

WG6 Production Meeting – Tuesday, November 22 (09:00 - 12:00)

- Report from visit of NewFlex company for GEM industrialization and news from GEMs production at NewFlex (F. Formenti, H. Taureg)
- Industrial GEM production at TECHTRA (P. BIELÓWKA)
- Industrial TGEM production at PRINT ELECTRONICS (V. Revivo)
- Report visit to ELTOS company for Micromegas industrialization (A. Delbart)

WG7: RD51 Common Teat-Beam in 2011

WG7: 2011 Test-Beam Experiences/Results – Tuesday, November 22 (09:00 - 12:00)

Three RD51 Test-Beam Periods in 2011:

- **24/June - 4/July (10 days)**
- **9/August - 21/August (13 days)**
- **17/October - 24/October (7 days)**

In 2011, Yorgos Tsipolitis has undertaken the major organizational effort:

THANK YOU VERY MUCH, YORGOS, FOR EXCELLENT ORGANIZATION !!!

There are some requests to upgrade some test-beam equipment infrastructure (e.g. Scintillators)

If you participated in the RD51 Test-Beam, please send your report to Yorgos about results/experience

RD51 Mini-Week Meeting (CERN, November 21-23, 2011):
https://indico.cern.ch/conferenceDisplay.py?confId=158402

- **Monday, November 21** (IT auditorium room, 31-3-004)
  - 14:00 - 15:00 Opening session
  - 15:00 - 18:30 WG2 - Physics issues

- **Tuesday, November 22**
  - 09:00-12:30 WG6 - Production (IT auditorium room, 31-3-004)
  - 09:00-12:00 WG7 - Test beam (160-1-009)
  - 14:00-19:00 WG1 - Technologies & new str. (IT auditorium room, 31-3-004)
  - 14:00-16:00 WG5 - Electronics (160-1-009)

- **Wednesday, November 23**
  - 09:00-12:30 WG5 - Electronics (IT auditorium room, 31-3-004)
  - 14:00-19:00 WG4 - Simulation & software (13-2-005)

Enjoy the meeting !