

PRESS RELEASE

Fostering Collaboration between the Particle Physics Community and Industry of Photon Detection

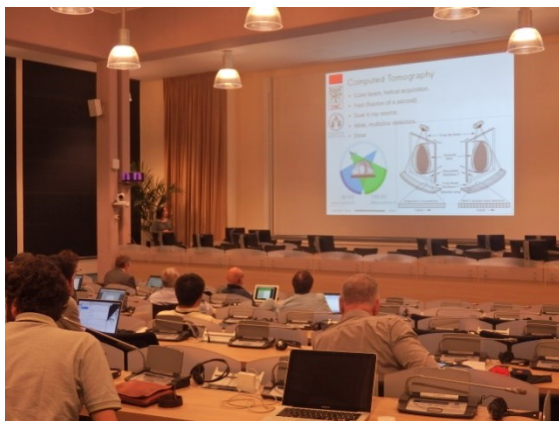
The specialized workshop "Photon Detection with Micro-Pattern Gaseous Detectors (MPGD)" organised by the RD 51 Collaboration at CERN in cooperation with the HEPTech Network and CERN's Knowledge Transfer Group, took place at CERN on 10th – 11th of June, 2015.

The goal of the event was to reveal the potential of the MPGD technologies and to help disseminating them beyond fundamental physics, by bringing together academic institutions, potential users and industry.

During the past 10 years, the deployment of MPGDs in operational experiments has increased enormously, because of a growing interest in the benefits of MPGDs in many fields of research. Technologies are being optimized for a broad range of applications, demonstrating the capabilities of this class of detector.

MPGDs have also found numerous applications in fields of fundamental research such as X-ray and neutron imaging, neutrino–nucleus scattering experiments, dark-matter and astrophysics experiments, plasma diagnostics, material sciences, radioactive-waste monitoring and security applications, medical physics and hadron therapy.

The event brought together thirty-six representatives of prominent research institutions from Europe, Israel, USA, and Japan, and industrial players, who shared their experience and achievements in photon detection.



Among others, applications of photon detection with MPGDs in the field of medical imaging were presented, and the speakers came to the conclusion that the strengths of various detectors should be utilized with regard to the respective application. Advantages and disadvantages of silicon-based and hybrid detectors were revealed and application opportunities relating to light sources, hard x-ray and gamma-ray detection as well as photon detection on

large areas were explored. Some implications on fundamental research were also discussed.

Prof. Joao Veloso from the University of Aveiro, Portugal, presented an example of successful technology transfer - a PET system for educational purposes designed for university courses on medical instrumentation in medical physics. EasyPET is developed by prof. Veloso's research team and will be launched to the market through CAEN, an Italian company specialized in electronics for radiation detectors and particle physics.

One of the industry representatives that attended the forum was TTA Techtra, from Wroclaw, Poland; a small company specialized in GEM (gas-electro multipliers) foils used for amplification of particles in new detectors such as CMS and ATLAS. Techtra was the first Polish company that applied for and received the right to use CERN technologies for commercial purposes. Piotr Bielowka, co-owner of Techtra, acknowledged the support in technology transfer received from the RD 51 Collaboration at CERN and from HEPTEch. At this event he was interested in new ideas for using GEMs for photon detection. “The basics of collaboration between us and CERN are that by taking care of the production process we enable the researchers to remain focused on their inventions, thus saving their time”, explains Mr. Bielowka.

PHOTONIS, a leading multinational high-technology group, presented the technology behind its Planacon photon detector (the detector of choice for many photon detection applications where large images are required) along with its digital imaging tool, and discussed possible advantages using compatible gases.



This was the third academia-industry matching event (AIME) organized jointly by the RD 51 Collaboration at CERN and HEPTEch. Jean-Marie Le Goff, the HEPTEch Chairman (CERN) acknowledged the added value of this cooperation and outlined its future perspectives.

“For HEPTEch the added value is the unique opportunity for the technology transfer offices (TTOs) to collaborate with researchers specialized in a particular field of technology - in this case MPGDs, in an attempt to help them find more industrial players who could support the development of their research and further on explore other areas of mutual benefit, such as commercialization and production of specific devices. Teaming up with researchers enables the TTOs to be involved in the process at its early stage, making them fully aware of the developments the researchers undertake and thus giving them an opportunity to identify appropriate industrial applications. The cooperation with the RD 51 Collaboration at CERN enlarges the scope of HEPTEch’s outreach within a very specific and fast developing research area, such as MPGDs”, explains Mr. Le Goff.

In his opinion, the perspectives of this cooperation are similar to what HEPTEch is now concluding with the Cryogenics community. “We would like to have a Memorandum of Understanding with the RD 51 Collaboration at CERN that will formalize our intention to jointly organize such kinds of academia-industry matching events at least once a year. First of all, it will help HEPTEch consolidate this collaboration and at the same time it should enable us to organize our agenda and bring a stronger message to industry. If we have a list of confirmed AIMEs, we could attract more industrial players”, clarifies the Chairman of HEPTEch.

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