5th International Conference on Micro-Pattern Gas Detectors (MPGD2017) and RD51 Collaboration Meeting

Temple University, Philadelphia, USA May 22-26, 2017

Meeting Home Page: https://phys.cst.temple.edu/mpgd2017/

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## HARPO, a Micromegas+GEM TPC for gamma polarimetry above 1 MeV.

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Gamma-ray Compton telescopes lack sensitivity above 1 MeV and polarimetry is hampered by multiple scattering in calorimetric telescopes below 100 MeV. To fill the gap and use pair creation between 1 and a few tens of MeV, a high-pressure Argon TPC was proposed as a gamma-ray detector. A (30 cm)<sup>3</sup> demonstrator read out by a hybrid Micromegas+GEM has been built and exposed to polarized photon beams at the NewSUBARU facility in Japan. A report on the operation and preliminary results on polarization asymmetry will be given. Before and after the beam test, the sealed detector operation has been monitored with cosmic rays during several months and the learning from this experience will be presented.

Author: COLAS, Paul (CEA/IRFU, Centre d'etude de Saclay Gif-sur-Yvette (FR))

**Presenter:** COLAS, Paul (CEA/IRFU,Centre d'étude de Saclay Gif-sur-Yvette (FR))

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