

# Micromegas detectors at Saclay : present and future experiments

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The MPGD team at CEA Saclay has been involved in designing, producing, validating, and, operating Micromegas detectors for the current and next generation of experiments in many different domains of physics. The detectors are now operating in the largest physics experiments including ATLAS-NSW at CERN, CLAS12 at Jefferson lab, and, sPHENIX at BNL. Early results and status of Micromegas in the US will be given before the introduction of the next generation of detectors for the P2 experiment at Mainz and for the ePIC experiment at the EIC at BNL.

These future experiments pose new challenges in term of rate, material budget, and, production. These aspects are being studied with “RD4” prototypes fully characterized in the lab and at the 2023 test beam at MAMI in Mainz. Results of this R&D will be shown with a focus on cylindrical 2D readout for the EIC and light Micromegas, the “sail tracker”, for the P2 experiment. Feedback of the operation of these detectors with different electronics such as DREAM, VMM, and SAMPA, will be provided. To conclude, an overview of the R&D made at Saclay on Micromegas including transparent MPGD that will shine a light on possible futures of the Micromegas technology.

## Collaboration

## Role of Submitter

I am the presenter

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