

# **DRD1**

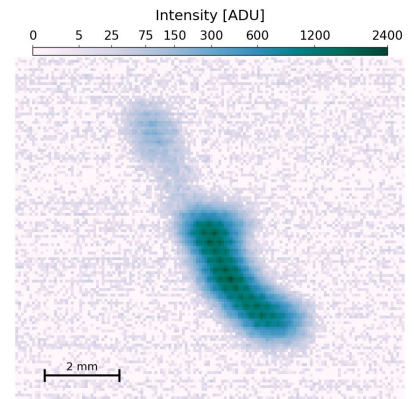
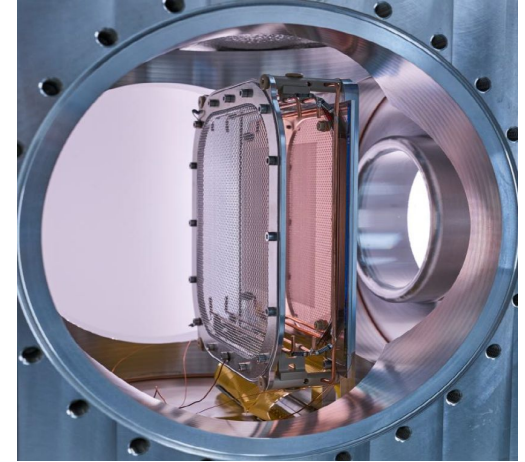
## **/gaseous detectors/**

Pawel Majewski

for MIGDAL and DarkSpehere experiments

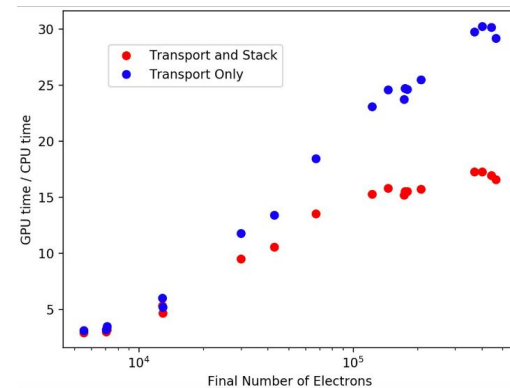
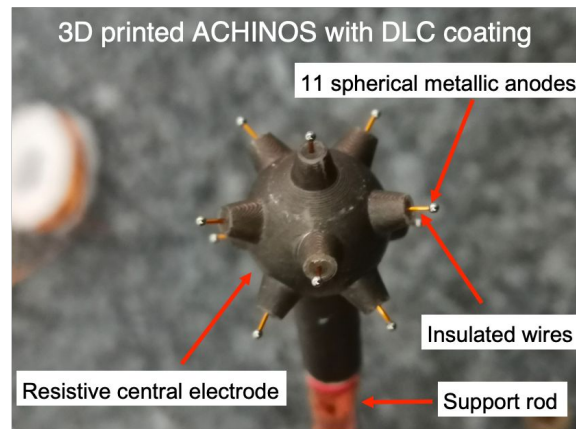
# Migdal In Galactic Dark mAtter expLoration (RAL/PPD)

- Member of RD51 (micropattern detectors) since 2021
- Supporting common funds through yearly fees
- Receiving support from RD51 through:
  - Transfer knowledge from the GDD group (member of MIGDAL)
  - Students and PDRAs training in the GDD lab at CERN
  - Common fund grant award together with UoB and FRIB (US)
  - Detector simulation software
- R&D plans
  - Development of low pressure Optical Time Projection chamber for rare events with a large dynamic range to allow simultaneous observation of low energy electrons and highly ionising nuclear recoils



# DarkSPHERE and more general R&D (UoB)

- Member of RD51 (micropattern detectors) since 2019 led by K. Nikolopoulos
- Supporting common fund projects
- Main (R&D) interest:
  - R&D in MPGDs (e.g. resistive materials, novel GEM structures, optical readout)
  - Spherical Proportional Counter amplification structures (ACHINOS)
  - Simulations of gaseous detectors with garf++ and Geant4 and their integration
  - Detector simulation software



GPU vs CPU gain in time during microscopic avalanches