

University of Glasgow Overview

- **Team:** Rachel Montgomery; Bjoern Seitz;; Frank Thomson; David Mahon (UoG/Lynkeos)
- **Existing experience:**
 - **Fast photon sensor characterisation**
 - PMT, MAPMT, MCP PMT (single channel and pixellated), SiPM and SiPM Arrays, LAPPD Gen 2
 - **Detecting Cherenkov light** from aerogel, quartz and fused silica/LiF radiators both in lab and at test beams
 - **Test beam experience:**
 - previous involvement with photon sensor studies in Cherenkov prototypes for CLAS12 RICH, ATLAS FP and PANDA disc DIRC
 - **Fast scintillators** for medical imaging applications e.g. TOF-PET (LYSO, GAGG, CSI, LFS, plastics, fibres)
 - Scintillating fibre based **muon tomography** set ups
- **Available/Soon to be acquired equipment**
 - **Laser characterisation test stand** (this test stand is frequently in use/shared - could be good to build a replica if funds available)
 - PILAS red and blue lasers;
 - Thorlabs sub-mm XY stages;
 - VME CAEN QDC/TDC (v792, v775, v1190);
 - CAEN desktop digitisers
 - PicoTDC on short term loan from CAEN (working on interface between discriminator card and picotdc input first before loan)
 - **Photosensors**
 - LAPPD Gen 2
 - H8500/H12700 MAPMTs
 - SiPM Arrays (several different)
 - Old Hamamatsu SL10 and Planacon MCP(square pixellated MCP PMT)
 - Several single channel PMTs (eg Photonis XP2020)
 - Several **scintillators** plus high intensity Sr90 source, as well as other standard **sources** and a neutron source (AmBe)
 - **Radiators:** fused silica bars and LiF from disc DIRC studies
 - **Cosmic stands** (see next slide)

University of Glasgow Test Stands

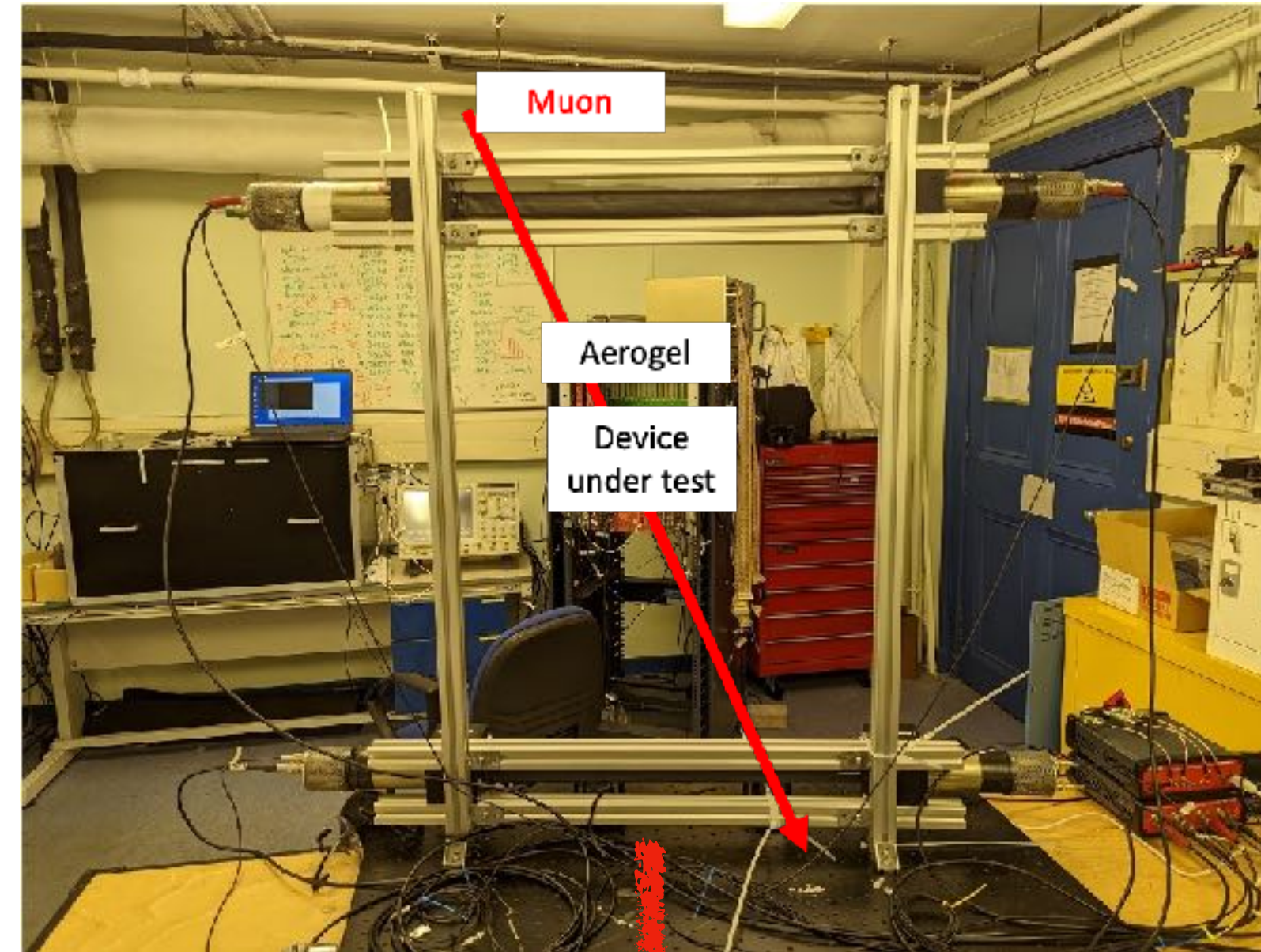
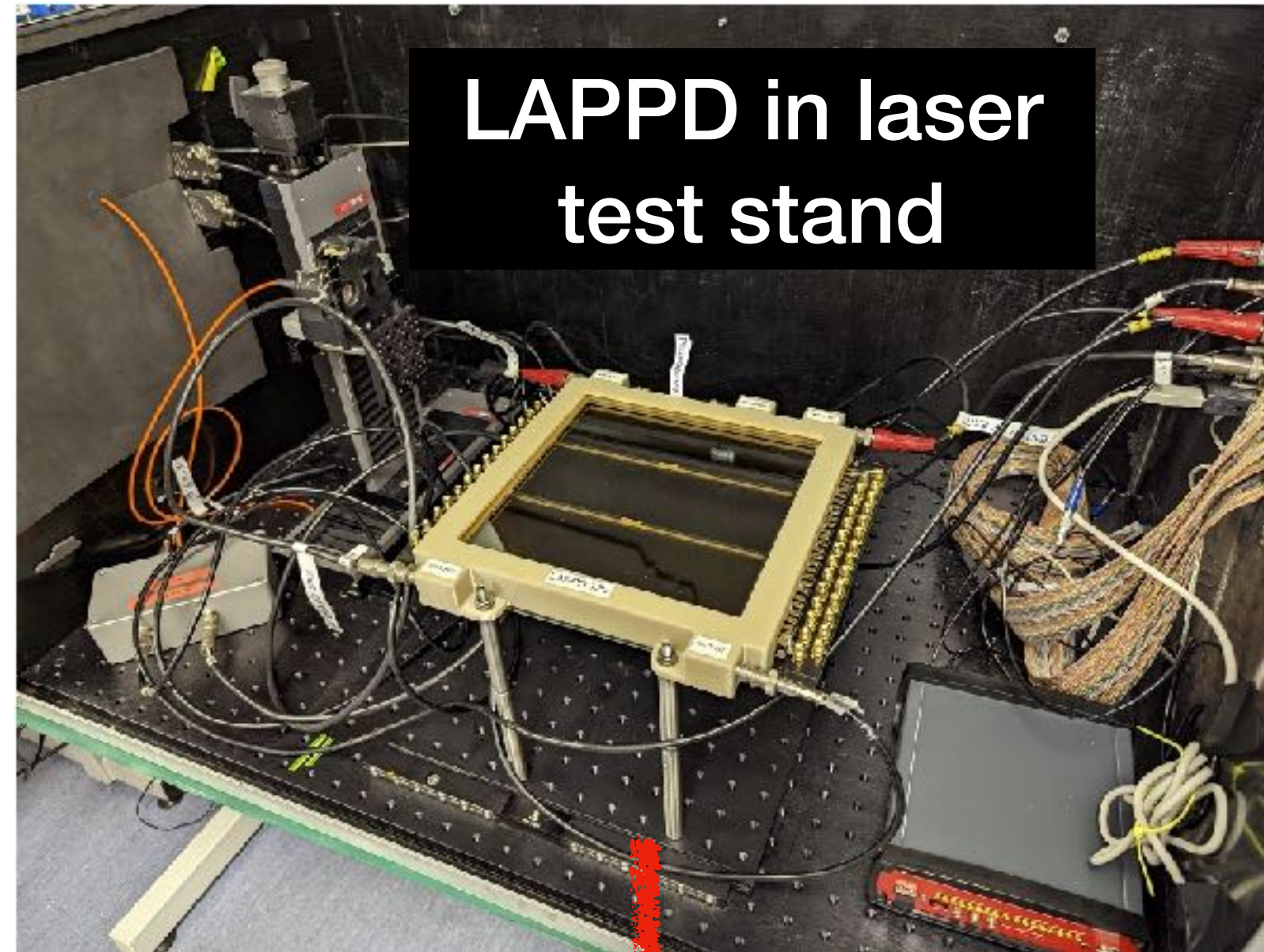
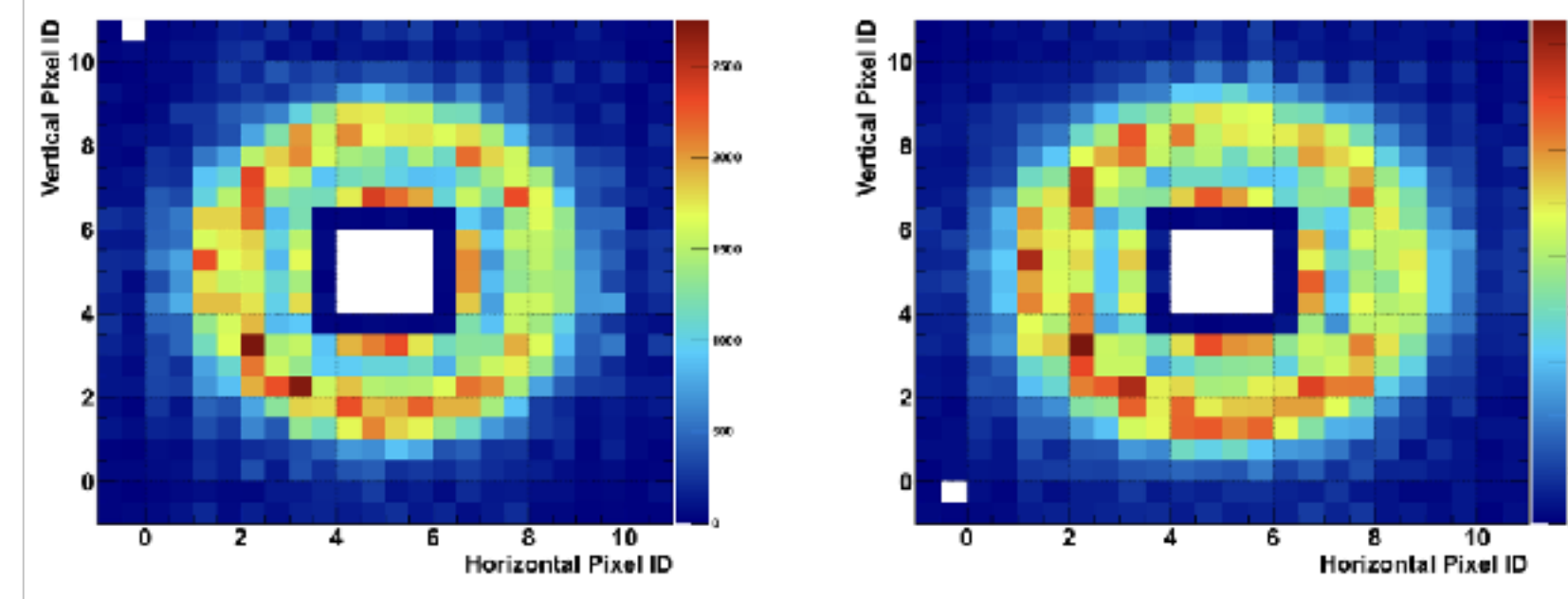
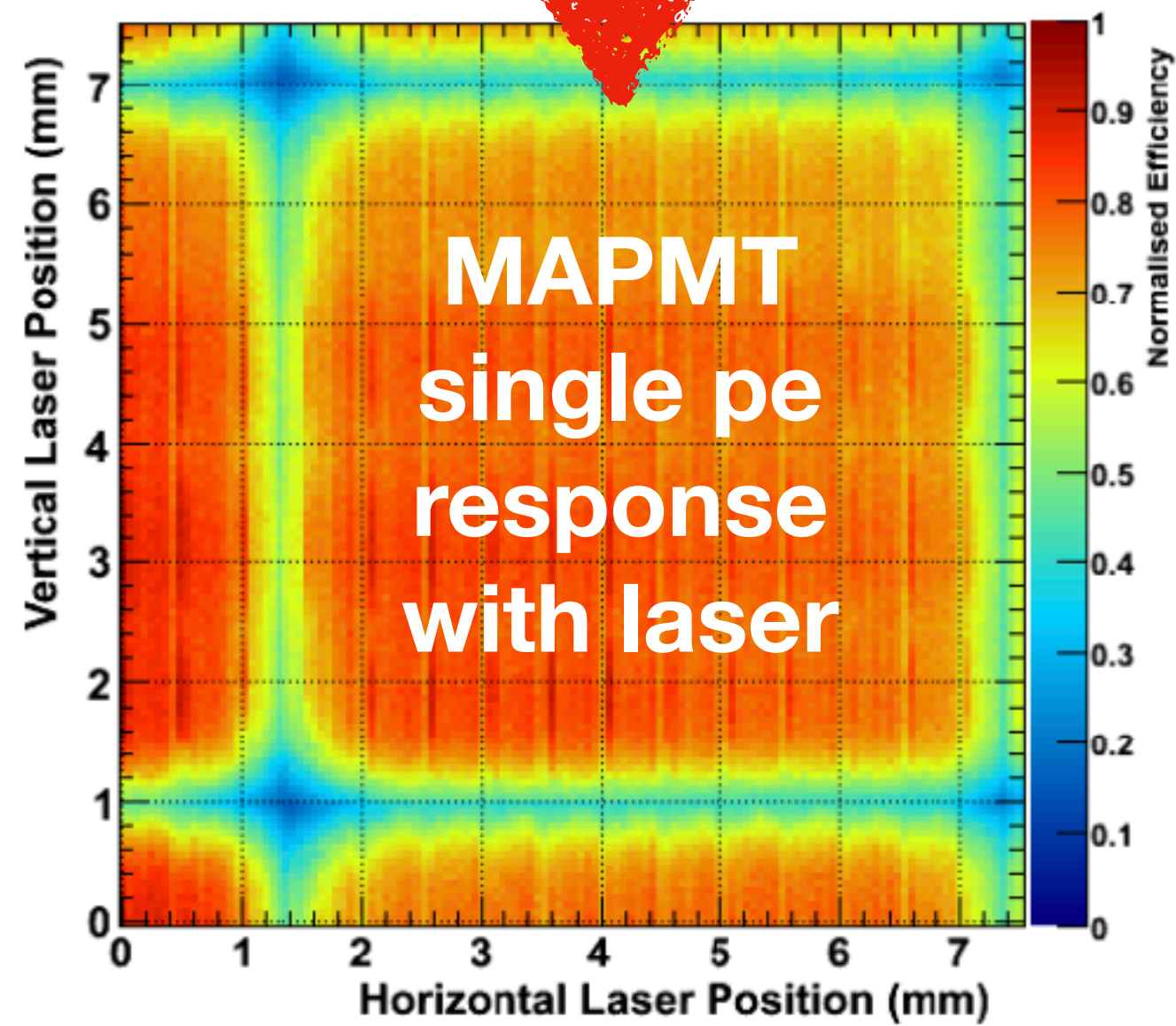


Image from Lynkeos:
<https://www.lynkeos.co.uk/>



Commercial Muon Imaging System
at Glasgow from Lynkeos Ltd

Scintillating fibre based system
Better tracking resolution