



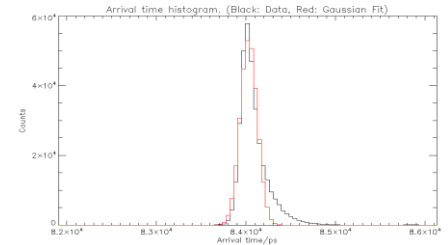
Operation of Microchannel Plate PMTs with TOFPET multichannel timing electronics

Steven Leach, Jon Lapington, University of Leicester, UK

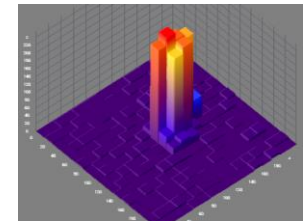
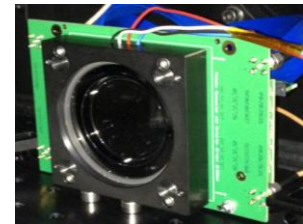
James Milnes, Tom Conneely, Photek Ltd., UK

Ricardo Bugalho, Stephan Tavernier, PETsys Electronics SA, Portugal

- We describe an experimental programme to evaluate the TOFPET ASIC timing electronics
 - Multichannel TOFPET ASIC is developed by PETsys SA
 - Timing performance is evaluated using microchannel plate PMTs in single photon counting mode.
- We present time resolution measurements using:
 - The on-board electronic stim signal,
 - A Photek PMT210 high speed single anode MCP photomultiplier detector
 - A multi-anode MCP detector using a pixelated multi-layer ceramic readout.



Time resolution of 96 ps rms using an MCP-PMT



Multi-anode MCP detector (top) and image of pulsed laser (bottom)