Contribution ID: **110** Type: **Poster**

Image Charge Multi-Role and Function Detectors

Tuesday 2 September 2008 15:10 (20 minutes)

The Image-Charge technique used with image tubes provides several operational and practical benefits by serving to isolate the electronic image readout from the detector. The simple dielectric interface between detector and readout provides vacuum isolation and no vacuum electrical feed-throughs are required. Since the readout is mechanically separate from the detector, an image tube of generic design can be simply optimised for various applications by attaching it to different readout devices and electronics. We present imaging performance results using a single image tube with a variety of readout devices suited to differing applications: a) A four electrode charge division tetra wedge anode, optimised for best spatial resolution in photon counting mode. b) A cross delay-line anode, enabling higher count rate, and the possibility of discriminating near co-incident events, and an event timing resolution of better than 1 nanosecond. c) A multi-anode readout connected, either to multi channel oscilloscope for analogue measurements of fast optical pulses, or alternately, to a multi-channel time correlated single photon counting (TCSPC) card.

Author: Dr MILNES, James

Presenter: Dr MILNES, James

Session Classification: Poster Session 1 - Astrophysics, Space, Gaseous and Novel Photon detectors

Track Classification: Novel Photon Detection Systems