

## **Overview of Data Acquisition Systems for Gaseous Detectors**

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Gas filled MWPCs are frequently instrumented by single channel readout schemes, such as charge division or delay-line readout. These photon-counting systems can provide 1D or 2D readout giving good performance. The principal limitation for use on synchrotron radiation sources is in count rate. Increasing levels of integration of electronics has allowed the development of highly parallel readout systems. These complement developments in microstructure gas detectors to make higher count rate detector systems.

Examples of the data acquisition systems for both single channel and parallel readout schemes will be given. These will include delay-line readout, scaler per channel and ADC per channel interpolation photon counting systems. In addition integrating mode readout will be discussed. Both 1D and 2D readout will be considered. In each case, the principal of operation will be explained along with the key technical challenges. The current performance and potential future performance will be discussed.