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## Position Sensitive Electron Detection for TEM with column parallel CCD

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A number of electron detectors for transmission electron microscopes (TEM) are being developed to overcome limitations of existing imaging cameras, i.e. poor modulation transfer, low efficiency, slow frame rate and limited dynamic range. A variety of new detection modes is being considered with these new detectors, but which will provide optimum performance? This work presents beam tests performed with a fast column parallel CCD detector developed by the Linear Collider Flavour Identification for particle detection at the ILC and uses custom data analysis to reproduce and compare three modes of operation: integrating imaging camera, binary active pixel sensor and position sensitive electron detection. These tests demonstrate that best performance is obtained with position sensitive detection, where filtering can be employed to remove clusters of large lateral displacement.

### Summary

Slides not uploaded at authors request - AP 2008/09/02

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