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by

M. Bonner Denton

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A REVOLUTION IN OPTICAL SPECTROSCOPY - HIGH PERFORMANCE ARRAY DETECTORS

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Index Headings: Multichannel detectors, charge injection detectors, charge transfer devices, electro-optical performance

ABSTRACT

Recent investigations will be presented which demonstrate how new types of Charge Transfer Device (CTD) array detectors can provide vastly superior performance to conventional approaches in a variety of optical spectroscopic applications. Operational characteristics of the two major classes of CTD's - charge coupled devices (CCD) and charge injection devices (CID) - will be briefly reviewed. Examples demonstrating the "trade-offs" between the two classes of CTD's and their relative merits will be presented. Entirely new spectroscopic frontiers such as the "Intelligent Atomic Emission Spectrometer" will be discussed.

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