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Radiation effects on true charge transfer TDI sensor in CMOS

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Time Delay and Integration (TDI) sensors are used to increase Signal to Noise Ratio (SNR) when imaging fast moving objects. Applications include industrial process monitoring and earth observation from aircraft or spacecraft. Radiation hardness needs to be evaluated before operating in the space environment.
The subject of this work is a true charge transfer TDI device, manufactured on a CMOS process, intended for earth observation applications. Changes in imaging performance due to irradiation of the TDI sensor are presented. In particular the effect of irradiation on Charge Transfer Efficiency (CTE) is shown.

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