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Status of Silicon Strip Sensor Measurements at Liverpool

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Dedicated RD50 charge multiplication sensors were annealed at room temperature and charge collection measurements were performed after several annealing steps. The multiplication sensors feature different structures specially designed to take advantage of multiplication after heavy irradiation. These devices were produced by Micron Semiconductor Ltd and irradiated with neutrons to fluences of 1e15 and 5e15 neq/cm^2. Some of these sensors were used to investigate the collected charge during constant biasing of the sensor.

Miniature silicon strip detectors (˜1x1cm) with different thicknesses from Hamamatsu K.K. and Micron Semiconductor Ltd. were irradiated at Birmingham and Ljubljana with doses up to 2e16 neq/cm^2. IV measurements were performed at different temperatures for the determination of the effective energy Eg and the current related damage rate alpha.

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