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Efficiency of the LHCb VELO sensors

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The LHCb VELO detector comprises of 88 silicon sensors, with two designs, one measuring the radial distance from the beam line and the other the azimuthal angle. The necessity to bring the signals for the radial measuring sensors to the edge of the detector requires an additional metal routing line layer. After operating the detector for a couple of years at the LHC effects were seen where the second metal layer routing lines began to pick up charge from the sensor directly and causes secondary fake clusters and reduced the charge collected by the main strip. This talk will present the current understanding of the issue, how it was discovered, how it is evolving and how it is simulated.

Primary author: HUTCHCROFT, David (University of Liverpool (GB))

Presenters: HUTCHCROFT, David (University of Liverpool (GB)); HUTCHCROFT, David (U)

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