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Local ground variations on the RD53B-ATLAS chip

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The RD53B chip is a dedicated chip designed in two versions to meet the demands of the ATLAS and CMS detector at the High Luminosity LHC (HL-LHC). This requires an advanced Front End (FE) circuit able to handle the increased data rates and radiation levels. This poster presents studies on the RD53B-ATLAS chip performed with analog injections to probe the local ground variations. Results show voltage variations up to 16 mV across the pixel matrix due to the ground rail design.

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