Contribution ID: **25** Type: **not specified**

A Long Term Study of Charge Multiplication

Friday 13 June 2014 11:20 (20 minutes)

We evaluate the long term evolution of the charge multiplication effect found in some sensors. This procedure is intended to test operation under realistic LHC conditions, such as exposure to extreme bias voltages for many days, bias voltage cycling, and running at very low temperature. We aim to understand if charge multiplication may be usefully relied upon for HL-HLC operation, or if it turns out to be a short-term benefit.

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Session Classification: Session 4 - Sensors with intrinsic gain - LGAD