Contribution ID: **91** Type: **Oral**

Tracking particles at fluences near 1E17 $n_{eq}/cm\hat{}2$

Monday 25 February 2019 11:30 (20 minutes)

In this talk I will review the possibility of using very thin Low Gain Avalanche Diodes (LGAD) (~ 25μm thick) as tracking detector at future hadron colliders, where particle fluence will about 1E17 n_{eq}/cm^2 In the present design, silicon sensors at the High-Luminosity LHC will be 100- 200μm thick, generating, before irradiation, signals of 1-2 fC. In our talk, we will show how very thin LGAD can provide signals of the same magnitude via the interplay of gain in the gain layer and gain in the bulk up to fluences of about 1E17 n_{eq}/cm^2.

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Session Classification: Session 1: Tracking detectors for HEP experiments