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Type: **Experiment**

Multi-charged particle search at ATLAS

A search for long-lived, multi-charged particles has been performed using the ATLAS detector. We have examined data taken during the 2011 LHC running, corresponding to an integrated luminosity of 4.4 fb^{-1} . A search was made for charged particle tracks exhibiting anomalously high ionization consistent with stable massive particles with charges from $|q|=2e$ to $|q|=6e$. For this search new variables of specific energy loss per path length (dE/dx) have been developed and used in the candidate selection. No excess is observed with respect to the prediction of Standard Model processes. The 95% C.L. cross-section limits are also interpreted as exclusion limits for a simplified Drell-Yan production model.

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