

Understanding the deformation issue of the ATLAS IBL detector

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The ATLAS cosmics run over the last month has revealed a stability issue in the mechanics of IBL detector. In particular a global and coherent rotation of the Z=0 detector cross section has been observed analyzing the alignment parameters of the muon tracks. Such instability affects the overall tracking performances. Understanding the causes of the deformation allows to set operation conditions meant to mitigate the deformation and reestablish the nominal detector performances. The talk collects the experimental evidences of the distortion and provides the mechanical explanation.

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