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The Alignment of the BESIII Drift Chamber Using Cosmic-ray Data

Thursday 24 May 2012 13:30 (4h 45m)

BESIII/BEPCII is a major upgrade of the BESII experiment at the Beijing Electron-Positron Collider (BEPC) for studies of hadron spectroscopy and tau-charm physics. The BESIII detector adopts a small cell helium-based drift chamber (MDC) as the cetral tracking detector. The momentum resolution was deteriorated due to misalignment in the data taking. In order to improve the momentum resolution, a software alignment is necessary to reduce the effect of mechanical imperfection on the reconstruction. The BESIII alignment software was developed in the framework of the BESIII Offline Software System (BOSS). It was applied in the alignment of the drift chamber using cosmic-ray data successfully. The momentum resolution was improved significantly after the alignment. The report will show the alignment method. The alignment results will also be reported.

Student? Enter 'yes'. See http://goo.gl/MVv53

no

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