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Cosmic ray tests of a 4.6 m-long test drift chamber for JLC

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Abstract

Performance of a 4.6 m-long drift chamber filled with a CO₂ iso-butane (90:10) mixture was studied using cosmic-ray data, in the course of detector R & D for JLC. After correcting the data for wire displacements due to gravitational and electrostatic forces, a spatial resolution of 100 μm per wire was achieved over the full length of the chamber. The relation between wire efficiency and oxygen remnant in the chamber gas is also discussed. © 2000 Elsevier Science B.V. All rights reserved.
