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Gas gain study for CO₂/isobutane mixtures

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Abstract

We have studied gas amplification properties of a proportional tube filled with CO₂/isobutane gas mixtures. The gas gain was measured for X- and b-rays as a function of the anode-wire surface field and was used to estimate gain variation along 4.6 m-long stereo anode wires of our proposed central drift chamber for JLC. During the gas gain study, we observed a strong saturation effect for point ionizations. (© 2000 Elsevier Science B.V. All rights reserved.)
