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Resistive Plate Chamber Rate Capability Studies DANIEL JUMPER, University of Illinois Urbana-Champaign, PHENIX COLLABORATION — Bakelite RPCs have been used in first level muon trigger applications in the CMS and ATLAS experiments at LHC and in the PHENIX experiment at RHIC. In hadron colliders RPCs have to withstand high levels of background rates. Using a novel method to test rate capability with a radioactive source, we have studied the possibility to further increase the rate capability of bakelite RPCs by changing the resistivity of the bakelite surface coating.

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