IDTM Workshop - Innovative Detector Technologies and Methods



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New developments in timing RPCs

Thursday, 14 September 2023 13:55 (20 minutes)

This talk will cover recent developments of timing RPCs focused mainly on the work developed in the LIP RPC R&D group. The talk will address recent developments in large-area, low-cost and high-performance timing RPCs capable to provide timing precision below 50 ps sigma, together with an efficiency higher than 98%, for modules of around 2 m^2 . These results were obtained with a full-scale prototype of the timing detector of future SHiP experiment, where a very good timing precision and affordable cost are needed to cover tens of square meters. In addition, the capability to measure simultaneously with time the 2D position, with sub-millimeter precision, will be shown in a prototype of 0.1 m^2 .

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