

Abstract Submitted  
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**QUARTIC: A Fast Time-of-flight Counter** PEDRO DUARTE, University of Texas, Arlington, FP420 COLLABORATION<sup>1</sup> — We present preliminary studies of a fast time-of-flight counter. This counter makes use of the Cerenkov effect to provide precise timing (10 to 30 psec scale) for protons scattered at small angles. One application is a proposed upgrade to the ATLAS and CMS detectors (FP420) that adds proton taggers 420 m upstream and downstream of the central detectors. Fast time-of-flight counters could be used to dramatically decrease backgrounds to events with a massive central system and forward/backward protons, by using timing to confirm that the protons originate from the same event vertex as the central system.

<sup>1</sup>Joint ATLAS/CMD R&D collaboration

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