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Status of CHICO2 C.Y. WU, E. KWAN, A. CHYZH, LLNL, D. CLINE, A.B. HAYES, U. of Rochester, I.Y. LEE, LBNL — To fully exploit the potential of GRETINA, the development of auxiliary charged-particle detector arrays with matching position resolution is highly beneficial. CHICO2 is a part of this coordinated effort to improve the position resolution of CHICO for GRETINA by pixelation of the position sensing. Pixels are not readout individually instead interconnected in a checker-board pattern before being coupled to the delay line. The actual position is determined by the time difference between readouts from both ends of delay line. The proof-of-principle work on this technique has been demonstrated successfully in early 2010. Additional tests have been performed to measure the charge distribution for a given avalanche and the correlation between the pixel size and the time resolution, which helps to optimize the design of pixelation. A hybrid pixelation design was proposed to maximize the theta resolution and minimize the impact on the phi resolution. This design together with the results from those tests will be presented. This work is supported by DOE, LLNL Contract DE-AC52-07NA27344 and LBNL Contract DE-AC02-05CH11231 as well as the NSF.

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