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Recent progress and future plans for ultra-high granularity CMOS ECAL

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The concept of a digital electromagmetic calorimeter using MAPS sensors as the active layers has been demonstrated using the EPICAL-2 prototype, a 24 layer, ~20 radiation length device. Each layer has an active area of 30×30 mm^2 provided by two ALPIDE sensors. Final results characterising the performance in terms of energy resolution, linearity and lateral shower profile using $1 - 6$~GeV electrons are presented. The results, obtained using sensors developed and optimised for the ALICE ITS upgrade, are comparable to those from an analogue silicon-tungsten calorimeter. Improvements using sensors designed with calorimetry as a target application are likely to be able to further enhance performance. Future prospects for futher development of the digital electromagnetic calorimeter concept will be discussed.

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