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3D IC Pixel Electronics, the next challenge

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Articles and advertisements related to 3D integrated circuits are now common in IC trade magazines. Numerous conferences and workshops are dedicated to developing the technologies needed for 3D ICs. Although HEP cannot drive the development of 3D technology, our community should be prepared to take advantage of the advances that are being made. In particular, there are new opportunities for pixel detectors in HEP that exploit the technologies being developed in industry for CMOS image sensors. This talk will present an overview of 3D technology, describe potential advantages for HEP, present results of the first 3D IC for HEP, and describe future plans in HEP to explore this technology. Looking to the future, 3D may be the next big challenge for HEP electronics designers.

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