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**Hans Schoutens\*** ([hschoutens@citytech.cuny.edu](mailto:hschoutens@citytech.cuny.edu)), Department of Mathematics, Graduate Center CUNY, 365 5th Avenue, NY, NY 10016. *Big Cohen-Macaulay algebras in mixed characteristic via Witt vectors.*

The theory of Witt vectors assigns to a ring of positive characteristic a (possibly non-Noetherian) ring of mixed characteristic. This process induces an action on the ideals of a power series ring over a complete discrete valuation ring. Of particular interest are the ideals that are invariant under this action: I show that their quotient ring then admits a big (=non-Noetherian) Cohen-Macaulay algebra. I will conclude with an application to local toric rings, which is a generalization of the classical toric rings. (Received January 26, 2016)