Finite Cohen–Macaulay Type and Smooth Non-Commutative Schemes

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Abstract. A commutative local Cohen–Macaulay ring \( R \) of finite Cohen–Macaulay type is known to be an isolated singularity; that is, \( \text{Spec}(R) \setminus \{ \mathfrak{m} \} \) is smooth. This paper proves a non-commutative analogue. Namely, if \( A \) is a (non-commutative) graded Artin–Schelter Cohen–Macaulay algebra which is fully bounded Noetherian and has finite Cohen–Macaulay type, then the non-commutative projective scheme determined by \( A \) is smooth.