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**Ellen E. Kirkman\*** (kirkman@wfu.edu), Box 7388 Wake Forest University, Department of Mathematics and Statistics, Winston-Salem, NC 27109, and **Andrew Conner, W. Frank Moore** and **Chelsea Walton**. *Noncommutative Knörrer's periodicity and noncommutative Kleinian singularities*.

Let  $A$  be a left noetherian Artin-Schelter regular algebra,  $f$  a normal and regular element of  $A$  of positive degree, and take  $B = A/(f)$ . Using “twisted matrix factorizations”, introduced by the first three authors with Cassidy, we prove a version of Knörrer’s Periodicity Theorem in this context. We show there exists a bijection between the set of isomorphism classes of indecomposable non-free maximal Cohen-Macaulay  $B$ -modules and those over (a noncommutative analog of) its second double branched cover  $(B^\#)^\#$ . We apply these results to the noncommutative Kleinian singularities studied by the first and fourth authors with Chan and Zhang. (Received August 26, 2018)