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Diane Maclagan* (maclagan@math.rutgers.edu), Department of Mathematics, Hill Center - Busch Campus, Rutgers University, Piscataway, NJ 08854. *Polyhedral geometry in the McKay correspondence.*

When $G \subseteq SL(3, \mathbb{C})$ the moduli space M_θ of representations of the McKay quiver is a crepant resolution of the quotient singularity \mathbb{C}^3/G . We give an explicit description of the component of M_θ that is birational to \mathbb{C}^3/G for abelian $G \subseteq GL(n, \mathbb{C})$ for arbitrary n as a (not necessarily normal) toric variety. This gives rise to an algorithm to determine for which θ the moduli space M_θ is a crepant resolution of \mathbb{C}^n/G . This is joint work with Alastair Craw (Stony Brook) and Rekha Thomas (Washington). (Received February 21, 2005)