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**Melissa Lindsey\*** ([melissa.lindsey@indwes.edu](mailto:melissa.lindsey@indwes.edu)). *Maximizing the global Betti numbers of lex-plus-powers ideals.*

We investigate the global Betti numbers of homogeneous ideals in a polynomial ring that contain a monomial complete intersection. Given a fixed monomial complete intersection in a polynomial ring we determine the maximum first and last Betti numbers for homogeneous ideal that contain the complete intersection. In the case of a polynomial ring in three variables we also determine the maximum second Betti number. We make use of the result of Mermin-Murai that proves the Lex Plus Powers conjecture for ideals containing a monomial regular sequence to restrict to Lex Plus Powers Ideals. (Received February 14, 2012)