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**Manoj Kummini\*** (kummini@math.ku.edu), 1460 Jayhawk Blvd Rm Snow 405, Department of Mathematics, Lawrence, KS 66045-7523. *Multiplicity Bounds for Quadratic Monomial Ideals.*

We prove the multiplicity bounds conjectured by Herzog-Huneke-Srinivasan and Herzog-Srinivasan for some classes of quadratic monomial ideals. The Taylor bound conjecture is proved for all quadratic monomial ideals, while the stronger conjecture, which is based on the minimal free resolution, is proved for edge ideals of some classes of graphs. We also discuss when the quotients by such edge ideals are Cohen-Macaulay and have a quasi-pure resolution. (Received September 10, 2007)