Sema Gunturkun* (sgunturkun@amherst.edu) and Mel Hochster. A bound on the Hilbert function of a quadratic ideal. Preliminary report.

We define a defect $\delta$ quadratic ideal as a homogeneous ideal generated by $n + \delta$ quadrics containing a regular sequence of quadratic forms. A bound for the Hilbert function of such quadratic ideals is conjectured by Eisenbud, Green and Harris using a corresponding monomial defect $\delta$ quadratic ideal. I will discuss this bound especially in degree three for the defect three quadratic ideals. This is a joint work with Mel Hochster. (Received September 17, 2019)