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Justin Hoffmeier*, jche60@mail.umkc.edu, and **Liana Segal**. *Generalized Koszul properties of compressed Gorenstein local rings*. Preliminary report.

Compressed Gorenstein local rings have been discussed recently in work of Rossi and Şega; they are defined as those local rings (R, \mathfrak{m}, k) of maximal length among all local Gorenstein Artinian rings of socle degree s , where $\mathfrak{m}^{s+1} = 0 \neq \mathfrak{m}^s$, and embedding dimension $e = \text{rank}_k(\mathfrak{m}/\mathfrak{m}^2)$. When $s = 2$ such rings are Koszul, in the sense that the associated graded ring with respect to \mathfrak{m} is a Koszul algebra. We prove that when $s > 2$ and s is even these rings satisfy various properties which can be understood as *generalized Koszul properties*. In particular, the Yoneda algebra $\text{Ext}_R(k, k)$ is generated in degrees 1 and 2. (Received February 07, 2014)