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Oana Veliche* (oveliche@math.utah.edu) and **Luchozar L. Avramov**
(avramov@math.unl.edu). *Stable cohomology over local rings.*

Stable cohomology is defined by Benson and Carlson, Mislin, and Vogel and it coincides with Tate cohomology when the ring is Gorenstein. It will be shown that the stable cohomology of the residue field of a local ring reflects significant properties of the ring, such as being regular, complete intersection, or Gorenstein. It carries a multiplicative structure, which will be determined for some Gorenstein rings (in particular, for all complete intersection rings) and also for some non-Gorenstein rings, where it exhibits a completely different behavior. (Received August 17, 2005)