

**Meeting:** 1004, Bowling Green, Kentucky, AMS CP 1, Session for Contributed Papers

1004-16-206      **Jason P Huffman\*** ([jason.huffman@gcsu.edu](mailto:jason.huffman@gcsu.edu)), Dept. of Mathematics & Comp. Sci., CBX 017, Milledgeville, GA 31061. *Preserving Properties in a Ring Extension*. Preliminary report.

Let  $R$  be an associative ring, not necessarily having unity, and let  $R^1$  denote the standard Dorroh extension of  $R$  to a ring with unity. It is well known that the Dorroh extension of a domain is a domain and that  $\mathbf{J}(R) = \mathbf{J}(R^1)$  where  $\mathbf{J}(R)$  represents the Jacobson radical of  $R$ . However, many familiar properties may be lost in the ring extension. Here, we consider the preservation of certain algebraic properties of a ring  $R$  in the extension  $R^1$ , including the possession of identities, chains of ideals, and other Amitsur-Kurosh radicals. Special consideration is given to the cases that  $R$  is either an algebra over a field  $F$  or an algebra over some commutative ring  $T$  with identity. (Received January 24, 2005)