

**Meeting:** 1001, Evanston, Illinois, SS 19A, Special Session on Algebraic Representations and Deformations

1001-16-263            **William Chin\*** (wchin@condor.depaul.edu), Dept. of Mathematical Sciences, DePaul University, Chicago, IL 60614, and **Leonid Krop**. *Quantized hyperalgebras of rank one.*

We study the quantized hyperalgebra  $U_\zeta$  obtained by specializing Lusztig's integral form for  $sl(2)$  to a root of unity  $\zeta$ , working in characteristic zero. We show that  $U_\zeta$  is a smash product  $u_\zeta \# U$  where  $u_\zeta$  is the Frobenius-Lusztig kernel and  $U$  is the ordinary enveloping algebra. We explicitly describe the prime ideals of  $U_\zeta$ . We then decompose  $u_\zeta$  as a  $U$ -module. This is applied to describe the center of  $U_\zeta$  and get a block decomposition. Finally we describe the lattice of cofinite ideals of  $U_\zeta$ . (Received August 28, 2004)