Hans E Nordstrom\* (nordstro@up.edu), Department of Mathematics, University of Oregon, 5000 N. Willamette BLVD, Portland, OR 97203. Associated primes over generalized Weyl algebras, II. Preliminary report.

We compute the associated primes of several known simple modules of the generalized Weyl algebra  $R[d, u, \sigma, q]$  over a possibly non-commutative base ring, R. While some of the well-know representation theory over commutative base rings can easily be expanded, we discuss the difficulty of the propagation of simple modules and their associated primes in the more general case. We offer several illustrative examples. (Received January 07, 2007)