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Jesse S. F. Levitt*, USC Dornsife, Department of Mathematics, 3620 S. Vermont Ave., KAP 104, Los Angeles, CA 90089, and **Milen Yakimov**. *Discriminants of Polynomial Identity Quantized Weyl Algebras*.

We present explicit formulas for the the discriminants of Polynomial Identity (PI) quantized Weyl algebras over a general class of central subalgebras along with several applications. Following a program proposed by Chan, Young and Zhang for investigating certain filtered PI algebras. We first classify the centers of PI quantized Weyl algebras, and examine the case where these algebras are then free over their centers. Two distinct approaches arise for calculating their discriminants, with one coming from deformation theory and Poisson geometry, while the other is based in the methods of quantum cluster algebras. Both formulations allow all such algebras to be classified and the discriminant is found to be both locally dominating and effective with applications to the automorphism and isomorphism problems for tensor products of these algebras. (Received February 27, 2017)