1126-16-290 **Nicholas Cooney***, nicholas.cooney@math.univ-bpclermont.fr, and **Iordan Ganev** and **David Jordan**. *Quantized Multiplicative Quiver Varieties at Roots of Unity.* Preliminary report.

To a quiver Q with dimension vector $\mathbf{d}$, one can associate an algebra $\mathcal{D}_q(Q)$, a flat q-deformation of the algebra of differential operators on the space of $\mathbf{d}$-dimensional representations of the quiver. There is also a quantum moment map compatible with various degenerations of the source and target. One can then form the quantum Hamiltonian reduction to obtain a new algebra A.

I will discuss the case where q is a root of unity. In this case, the algebra $\mathcal{D}_q(Q)$ attains a large centre. For dimension $\mathbf{d} = (1, 1, \ldots, 1)$, $\mathcal{D}_q(Q)$ is locally a matrix algebra. One can associate multiplicative analogues of hypertoric varieties to Q with this dimension vector. In this case, the algebras A are quantizations of these varieties which are again locally matrix algebras. The category of coherent A-modules is derived equivalent to that of modules over the global sections algebra.

I will place this work in the context of a paradigm prevalent in geometric representation theory before giving a more detailed technical treatment, including a discussion of possible extensions of some of these results to higher dimension vectors. This is joint work with I.Ganev and D.Jordan. (Received January 16, 2017)