1125-57-731 **Charles Frohman*** (charles-frohman@uiowa.edu), Department of Mathematics, The University of Iowa, Iowa City, IA 52242, and **Joanna Kania-Bartoszynska** and **Thang Le**.

Representations of the Kauffman bracket skein algebra at roots of unity.

Let F be a finite type surface, ζ a primitive nth root of unity. The Kauffman bracket skein algebra $K_\zeta(F)$ is a noncommutative algebra built from equivalence classes of framed links in $F \times [0,1]$ modulo the Kauffman bracket skein relations with the variable set to be ζ. The product comes from stacking. If $n = 2 \pmod 4$, then the center of $K_\zeta(F)$ is a finite extension of the coordinate ring of the $SL_2\mathbb{C}$-character variety of the fundamental group of F. If n is odd, the center of $K_\zeta(F)$ is a finite extension of the coordinate ring of that part of the $PSL_2\mathbb{C}$-character variety of the fundamental group of F coming from representations that lift to $SL_2\mathbb{C}$.

We prove that there is a nonempty Zariski open subset V_c of the maximal spectrum of the center of $K_\zeta(F)$ that parameterizes a family of irreducible representations of $K_\zeta(F)$ all having the same dimension. If $m = \frac{n}{gcd(n,4)}$, if $n \neq 0 \pmod 4$, and F has at least one puncture the dimension of these representations is $m^{\frac{-3e(F)-p}{2}}$ where $e(F)$ is the Euler characteristic of F and p is the number of punctures. (Received September 10, 2016)