1069-16-262 **Ryan Kinser*** (ryan.kinser@uconn.edu). *Small tree modules for quivers with one vertex.* Preliminary report.

We will discuss some tools for studying indecomposable tree modules of small dimension d, having in mind the quiver S_m with one vertex and m loops as our main focus.

Utilizing some computations of Le Bruyn, we show that for $d \leq 5$ and any m, the number of dimension d tree modules for S_m is equal to $ai_{m,d}(1)$, where $ai_{m,d}(q)$ is the polynomial in q counting isomorphism classes of (absolutely) indecomposable representations of dimension d over the field with q elements. (The number $ai_{m,d}(1)$ is also the Euler characteristic of the moduli space of indecomposable complex representations of dimension d.)

The computations quickly become difficult as d grows, so for $d > 5$ it is not known if it is still true. We end with some other examples where this phenomenon is exhibited, and speculate on the relation of these observations to a conjecture of Kac. (Received January 24, 2011)