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Jieru Zhu* (jieru.zhu-1@ou.edu), Department of Mathematics, University of Oklahoma, Norman, OK 73019-3103, and **Jonathan Kujawa**, University of Oklahoma. *Presenting cyclotomic Schur algebras.*

A classical result states that the action of $\mathfrak{gl}(V)$ and the symmetric group on d letters mutually centralize each other on the d -fold tensor of V . If V admits an action by $\mathbb{Z}/r\mathbb{Z}$, it induces an action of the wreath product of $\mathbb{Z}/r\mathbb{Z}$ and the symmetric group on d letters. A Levi Lie subalgebra \mathfrak{g} of $\mathfrak{gl}(V)$ gives the full centralizer of this action, and we further showed a presentation for the cyclotomic Schur algebra as a quotient of the enveloping algebra of \mathfrak{g} . This also provides a PBW type basis and a second presentation with idempotent generators. These results extend to the quantum setting and yield similar presentations and a basis for the the cyclotomic q-Schur algebra. When $r = 2$, they become presentations for the Type B hyperoctahedral Schur algebra defined by Richard Green. (Received September 07, 2017)