1125-18-2063   **Andrew Schopieray*** (`schopier@uoregon.edu`). *Finiteness of quantum subgroups of*
                  $SU(n)$. Preliminary report.

Connected étale algebras in a modular tensor category can be used to identify the relations generated by its class in the Witt group of nondegenerate braided fusion categories or to construct its module categories and modular invariants. All such algebras have been classified for the categories $\mathcal{C}(\mathfrak{g}, k)$ constructed from quantum groups at roots of unity where $k \in \mathbb{Z}_{\geq 0}$ and $\mathfrak{g}$ is either $\mathfrak{sl}_2$ or $\mathfrak{sl}_3$. In these cases there is an ADE classification scheme with Type A and Type D being a predictable family of algebras and Type E being the exceptional algebras which do not fall into the previous classes. Here we present proof that there is a finite bound on the level k for which exceptional connected étale algebras of $\mathcal{C}(\mathfrak{sl}_4, k)$ can exist and discuss a generalization of this method to general $\mathfrak{sl}_n$. (Received September 19, 2016)