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Shlomo Gelaki* (gelaki@iastate.edu), Iowa State University, Department of Mathematics, 411 Morrill Road, Ames, IA 50011. *Twisting of affine algebraic groups.*

The theory of twisting deformations of a Hopf algebra H goes back to Drinfeld and was extensively studied by Etingof-Kazhdan, Movshev, Etingof-Gelaki, and others. Namely, a Hopf 2-cocycle J in $(H \otimes H)^*$ gives rise to a new Hopf algebra ${}_JH_J$ such that the tensor corepresentation categories of H and ${}_JH_J$ are equivalent. In my talk I will first discuss the classification of Hopf 2-cocycles J in $(\mathcal{O}(G) \otimes \mathcal{O}(G))^*$, where $\mathcal{O}(G)$ is the coordinate algebra of a connected nilpotent algebraic group G over \mathbb{C} , and then present some general results about the algebra structure and representation theory of the twisted cotriangular Hopf algebra ${}_J\mathcal{O}(G)_J$ and the twisted algebra $\mathcal{O}(G)_J$. (Received January 18, 2021)