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Invariant Drinfeld twists on group algebras

Drinfeld twists were introduced by Drinfeld in his work on quasi-Hopf algebras; they have been used to classify certain classes of (co)semisimple Hopf algebras. In joint work with Pierre Guillot (arXiv:0903.2807), after observing that the invariant Drinfeld twists on a Hopf algebra form a group, we determine this group when the Hopf algebra is the algebra of a finite group G. The answer involves the group of class-preserving outer automorphisms of G as well as all abelian normal subgroups of G of central type. In my lecture I shall also present several examples for which the group of invariant twists has been completely computed by us.