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and Exponents.*

It is not difficult to see that the entries of the Verlinde matrix of a semisimple factorizable Hopf algebra are contained in the cyclotomic field determined by its exponent. But as the Drinfel'd double of the symmetric group on three letters demonstrates, this is not necessarily the smallest cyclotomic field that contains these entries. On the other hand, the cyclotomic field determined by the exponent is close to being as small as possible, as we show in the talk: If N is the exponent of the semisimple factorizable Hopf algebra and C is the conductor of the field that is generated by the entries of its Verlinde matrix, then N divides the least common multiple of $2C$ and 24. Here, the conductor of an abelian number field is the order of the root of unity that generates the smallest cyclotomic field containing this abelian field.

The stated result holds more generally for Galois modular data. It follows from work of Y. Zhu and the speaker that modular data coming from semisimple factorizable Hopf algebras are Galois. We note that S.-H. Ng has, in a conference talk in Almeria in July 2011, announced that modular data coming from modular categories also have the Galois property, which would imply that this result can be generalized accordingly. (Received September 22, 2011)