1075-16-73 **M. Susan Montgomery*** (smontgom@math.usc.edu), Dept of Mathematics, KAP 108, University of Southern California, 3620 S. Vermont Ave, Los Angeles, CA 90089-2532. *Values of Frobenius-Schur indicators for Hopf algebras.*

Let H be a semisimple Hopf algebra over $\mathbb{C}$, and let V be an irreducible representation of H. It is known that for each integer n, $1 \leq n \leq Exp(H)$, one may define $\nu_n(V)$, the n^{th} Frobenius-Schur indicator of V, generalizing the facts for representations of finite groups. The indicators are gauge invariants, that is they are invariants for the monoidal category of representations of H, and they have had nice applications.

Although for the group algebra $\mathbb{C}G$ of a finite group G, all values of $\nu_n(V)$ are integers, this is not true in general for Hopf algebras, although they must lie in the ring of n^{th} cyclotomic integers (Kashina-Sommerhäuser-Zhu). It was hoped that for nice examples, such as $H = D(G)$, the Drinfel'd double, the values of $\nu_n(V)$ would still be integers.

Recently this has been shown to be true for $D(G)$ in many examples. We discuss these positive results, due variously to Marc Keilberg 2010, Rebecca Courter 2011, and in new work of the speaker joint with Mio Iovanov and Geoff Mason. (Received August 22, 2011)