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Nantel Bergeron* (bergeron@yorku.ca), Dept. of Math.and Stat., York University, 4700 Keele st, Toronto, Ontario M3J 1P3, Canada, and **Marcelo Aguiar** and **Nathaiel Thiem**. *Why a supercharacter theoretic Hopf Monoid of set partitions?*

In his talk, Nat Thiem introduced the supercharacter theory of the finite groups of unipotent uppertriangular matrices and the associated Hopf monoid of supercharacters. Why would one do such a thing? To convince ourselves that this is interesting work, I will show that at the Hopf monoid level the formulas for the antipode and primitive elements are much more elegant than their Hopf algebraic counterparts. Additionally, since Hopf monoid gives rise to many Hopf algebras, in some cases, we get the analogous results in the Hopf algebras for free, shedding a new light on Hopf algebra results. In particular, we can show that the antipode is triangular on the supercharacter basis, which is a phenomenon observed but left open during the AIM workshop on supercharacter theory and combinatorial Hopf algebras (see ArXiv:1009.4134). (Received June 27, 2011)