

Meeting: 999, Nashville, Tennessee, SS 1A, Special Session on Von Neumann Algebras and Noncommutative Ergodic Theory

999-46-115 **Dimitri Shlyakhtenko*** (shlyakht@math.ucla.edu), Department of Mathematics, UCLA, Los Angeles, CA 90066. *Estimates for non-microstates free entropy dimension.*

We give upper and lower estimates for Voiculescu's non-microstates free entropy dimension. We give a general upper estimate on the free entropy dimension of generators of a tracial algebra that involves the L^2 Betti numbers of that algebra (joint work with A. Connes). In the case of a group algebra, the estimate turns out to be sharp (joint work with I. Mineyev). We also present a sharper version of the previously announced lower estimate, which is related to the question of existence of a dual system in the sense of Voiculescu. (Received August 17, 2004)