1041-05-17   **S Assaf*** (`sassaf@math.mit.edu`), Massachusetts Institute of Technology, Department of Mathematics, Building 2, Room 236, Cambridge, MA 02139. *Kicking the n! Theorem.*

In the mid 90s, Garsia and Haiman conjectured that the dimension of the Garsia-Haiman module R_mu is n!, and they showed that the resolution of this conjecture is equivalent to the Macdonald Positivity Conjecture. Haiman proved these conjectures in 2001 using algebraic geometry, but the question remains to find an explicit basis for R_mu which would give a simple proof of the dimension. Using the theory of Orbit Harmonics developed by Garsia and Haiman, we present a "kicking basis" for R_mu when mu has two columns. This basis has many nice features, including compatibility with intersections. (Received June 16, 2008)