1048-05-198 J. Haglund* (jhaglund@math.upenn.edu), J. Morse and M. Zabrocki. Hall Littlewood Polynomials and the Nabla Operator from Macdonald Theory. Preliminary report.

We introduce a conjectured combinatorial description for the monomial expansion of the nabla operator applied to a Hall-Litlewood polynomial. We show how our conjecture contains both the "shuffle conjecture" of Haglund, Haiman, Loehr, Remmel and Ulyanov for the character of diagonal harmonics and a more recent conjecture of Bergeron, Descouens, and Zabrocki (which involves nabla applied to a certain k-Schur function) as special cases. (Received February 08, 2009)