1014-11-1142   **Ben Brubaker*** (`brubaker@math.stanford.edu`), 450 Serra Mall - Building 380, Department of Mathematics, Stanford, CA 94305-2125. *Weyl Group Multiple Dirichlet Series: The Unstable Case.*

In the previous talk in this session, Solomon Friedberg will have described a family of Dirichlet series in several complex variables which possess functional equations and analytic continuation. Their coefficients are of arithmetic interest, including Gauss sums built from power residue symbols. Brubaker, Bump, and Friedberg proved the analytic continuation for these series using combinatorics of Lie type, involving the Weyl group associated to given root system. Hence we call these "Weyl group multiple Dirichlet series." In the case where the Dirichlet series contains nth power residue symbols with sufficiently large n (depending on data from the given root system), the coefficients are in one-to-one correspondence with the Weyl group. In this talk, we discuss the rather different picture that emerges when the given n is not in this stable range. Again we rely on combinatorics of Lie type, but of a different flavor involving Gelfand-Tsetlin patterns to be described in the talk. (Received September 27, 2005)

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