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**Anna Puskas\*** (apuskas@math.columbia.edu). *Metaplectic Demazure and Demazure-Lusztig operators.*

There are two different approaches to constructing p-adic metaplectic Whittaker functions. One approach, due to Chinta and Offen for  $GL_r$  and to McNamara in general, represents the spherical Whittaker function in terms of a sum over a Weyl group. The second approach, by Brubaker, Bump and Friedberg and separately by McNamara, expresses it as a sum over a highest weight crystal. The goal is to establish a direct connection between these two approaches. By such a direct connection, one hopes to extend the crystal description from type  $A$  to greater generality. Demazure and Demazure-Lusztig operators appear in relevant formulas in the non-metaplectic setting: the Demazure Character formula, Tokuyama's theorem and the work of Brubaker, Bump and Licata in describing Iwahori-Whittaker functions. This talk constitutes a first step towards this goal. We define metaplectic analogues of Demazure and Demazure-Lusztig operators and present two character formulas involving the operators for the long word. Some work in progress, aiming to find similar formulas for metaplectic Iwahori-Whittaker functions will also be mentioned. This is joint work with Gautam Chinta and Paul E Gunnells. (Received August 19, 2013)