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Daniel W Bump*, Department of Mathematics, Building 380, Stanford, CA 94305-2125. *Schur polynomials, metaplectic Whittaker functions and the Yang-Baxter equation, by Daniel Bump, Ben Brubaker and Solomon Friedberg.*

It was shown by Hamel and King that a Schur polynomial times a deformation of the Weyl denominator could be expressed as the partition function of a statistical mechanical system, the six vertex model with particular Boltzmann weights. A new proof of this is given using the Yang-Baxter equation. Using the Casselman-Shalika formula, this gives an interpretation of the Whittaker function on $GL(n, F)$ where F is a p -adic field. This “statistical” interpretation extends to the metaplectic covers of $GL(n, F)$, and gives a new method of studying p -adic Whittaker functions. (Received September 21, 2009)