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Jacob Greenstein* (jacob.greenstein@ucr.edu), Department of Mathematics, University of California Riverside, Riverside, CA 92521-0135, and **David Hernandez**, Ecole Normale Supérieure, Paris, France. *Braid group, quantum Heisenberg algebra and q,t -characters*. Preliminary report.

The aim of this work is to extend the action of the braid group on the algebra of q -characters, defined by Chari, to the non-commutative setting of q,t -characters. The resulting action shows some remarkable combinatorial properties peculiar to the non-commutative setting. It can also be applied to the study of Lusztig's action of the braid group on some simple highest weight integrable modules, via the vertex operator construction. (Received September 12, 2005)