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Bhama Srinivasan* (srinivas@uic.edu), Department of Mathematics, University of Illinois at Chicago, 851 S.Morgan Street, Chicago, IL 60607. *The Heisenberg algebra and $GL(n, q)$* . Preliminary report.

B.Leclerc and J-Y.Thibon [Int.Math.Res.Notices 9 (1996), 447-456] have studied the action of an affine Lie algebra \widehat{sl}_e and of a Heisenberg algebra H_e on a Fock space with basis indexed by partitions of all non-negative n . We consider this basis as indexing the unipotent representations of $GL(n, q)$ for all non-negative n and study the action of H_e . In particular, Leclerc and Thibon introduced certain operators in H_e which, when applied to the basis vector indexed by the empty partition, give the highest weight vectors for the irreducible representations of \widehat{sl}_e on the Fock space. We show that these operators are related to Deligne-Lusztig operators. (Received September 20, 2012)