1024-16-171 **Jason P Bell*** (jpb@math.sfu.ca), Department of Mathematics, 8888 University Dr., Burnaby, BC V5A 1S6, Canada, and **Stephane Launois**. *Primitive ideals in quantum matrices.* Preliminary report.

Goodearl and Letzter showed that if one uses the torus action on a ring of quantum matrices, then there are finitely many prime ideals, called H-primes, stable under this action. Cauchon later gave a formula for the number of H-primes in the ring on $m \times n$ quantum matrices. We consider the following question: how many H-primes in the ring of $m \times n$ quantum matrices are primitive? Lenagan and Launois answered this question for $1 \times n$ quantum matrices. We give a formula for the number of primitive H-prime ideals in $2 \times n$ and $3 \times n$ quantum matrices. In particular, we show that for $1 \times n$ quantum matrices, the proportion of primitive H-primes tends to $1/2$ as $n \to \infty$; for $2 \times n$ quantum matrices, the proportion of primitive H-primes tends to $3/8$; and for $3 \times n$ quantum matrices, the proportion of primitive H-primes tends to $15/64$. We give several conjectures about the distribution of primitive H-primes for $m \times n$ quantum matrices for general m and n. (Received January 08, 2007)