1067-17-899 **Rebecca L. Jayne*** (rljayne@ncsu.edu), North Carolina State University, Department of Mathematics, Box 8205, Raleigh, NC 27695. *On maximal weights of integrable $\widehat{sl}(n,\mathbb{C})$-modules.* Preliminary report.

For $\lambda = k\Lambda_0$, let $V(\lambda)$ be the integrable highest weight $\widehat{sl}(n,\mathbb{C})$-module. A dominant weight μ of $V(\lambda)$ is maximal if $\mu + \delta$ is not a weight. It is known that the set of maximal dominant weights of $V(\lambda)$ is finite. For $k \geq 1$, we give explicit descriptions of these maximal dominant weights and conjecture that their multiplicities are given by certain avoiding permutations. In particular, we show that for $k = 2$, the multiplicities are in one-to-one correspondence with 321-avoiding permutations. (Received September 16, 2010)