1106-46-337 **William E Gryc*** (wgryc@muhlenberg.edu) and **Todd Kemp**. *A Sharp Inequality for Taylor Coefficients in Fock Spaces.*

For $\alpha > 0$ and $1 < p < \infty$, let F^p_α denote the set of all holomorphic functions of one complex variable who have finite L^p norm against the gaussian probability measure whose Radon-Nikodym derivative against Lebesgue measure is $\frac{\alpha p}{2\pi}\exp\left(-\frac{\alpha p}{2}|z|^2\right)$. F^p_α is sometimes called a Fock space or a Segal–Bargmann space. For $f \in F^p_\alpha$, let $\|f\|_{p,\alpha}$ denote the L^p norm described above. Furthermore for any $f \in F^p_\alpha$ and nonnegative integer n, let a_n denote the n^{th} Taylor coefficient of f (centered at 0). We will prove that $|a_n| \leq \frac{\left(\frac{\alpha p}{2}\right)^n}{\Gamma\left(\frac{np}{2}+1\right)}\|f\|_{p,\alpha}$, and that this inequality is equality if and only if f is a constant multiple of z^n. (Received August 23, 2014)