1086-46-1483 **William E Gryc*** (wgryc@muhlenberg.edu), Department of Mathematics & Computer Science, Muhlenberg College, 2400 Chew St, Allentown, PA 18104, and **Todd Kemp**. *Sharpness Results for Duality in Segal-Bargmann Spaces.* Preliminary report.

For $\alpha > 0$ let γ_α denote the standard Gaussian probability measure on $\mathbb{C}^n$ with variance $(2\alpha)^{-n}$. Let $L^p_{hol}(\gamma_{\alpha p/2})$ denote the holomorphic functions that are contained in $L^p(\gamma_{\alpha p/2})$. Janson, Peetre, and Rochberg showed that $L^p_{hol}(\gamma_{\alpha p/2})$ and $L^{p'}_{hol}(\gamma_{\alpha p'/2})$ are dual to each other under the L^2-pairing $(\cdot,\cdot)_\alpha$ of $L^2_{hol}(\gamma_\alpha)$. In previous work the authors found an inequality of the equivalence of the norms. Specifically,

$$\|g\|_{L^{p'}(\gamma_{\alpha p'/2})} \le \|(\cdot,g)_\alpha\|_{(L^p_{hol}(\gamma_{\alpha p/2}))^*} \le \left(\frac{2}{p^{1/p}p'^{1/p'}}\right)^n \|g\|_{L^{p'}(\gamma_{\alpha p'/2})}.$$

This talk will address in-progress research regarding the sharpness of the constants in the above inequality. In particular, we will demonstrate a direct relationship between the fiber over g of the projection $P_\alpha : L^p(\gamma_{\alpha p/2}) \to L^p_{hol}(\gamma_{\alpha p/2})$ and the dual norm $\|(\cdot,g)_\alpha\|_{(L^p_{hol}(\gamma_{\alpha p/2}))^*}$, a pointwise bound for functions in $L^p_{hol}(\gamma_{\alpha p/2})$, and sharpness in the first inequality given above. (Received September 22, 2012)