1067-44-340 **William E Gryc*** (wgryc@muhlenberg.edu), Dept. of Mathematics and Computer Science, Muhlenberg College, 2400 Chew St., Allentown, PA 18104-5586, and **Todd Kemp** (tkemp@math.ucsd.edu), Department of Mathematics, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0112. *The L^p norm of the Segal-Bargmann Transform.*

The Segal-Bargmann projection is a projection $P_\alpha : L^2(\mu_\alpha) \to \mathcal{H}L^2(\mu_\alpha)$, where α is any positive real number, μ_α is a Gaussian measure on $\mathbb{C}^n$ given by $d\mu_\alpha = \left(\frac{\alpha}{\pi}\right)^n e^{-\alpha|z|^2} dm$ (where dm is Lebesgue measure on $\mathbb{C}^n$), and $\mathcal{H}L^2(\mu_\alpha)$ is the space of functions in $L^2(\mu_\alpha)$ that are also holomorphic on $\mathbb{C}^n$. For $1 < p < \infty$, this projection can be extended to a bounded transformation $P_\alpha : L^p(\mu_{\alpha p/2}) \to \mathcal{H}L^p(\mu_{\alpha p/2})$. In fact, if we denote the norm of the above operator as $\|P_\alpha\|_{p \to p}$, it is not difficult to show that $\|P_\alpha\|_{p\to p} \leq 2^n$.

In this talk we will show that in the case $n = 1$, the norm $\|P_\alpha\|_{p\to p}$ can be computed exactly as $\|P_\alpha\|_{p\to p} = \frac{2}{p^{1/p} p'^{1/p'}}$, where p' is defined as $\frac{1}{p'} = 1 - \frac{1}{p}$. For $n > 1$, we will show that $\|P_\alpha\|_{p\to p} \geq \left(\frac{2}{p^{1/p} p'^{1/p'}}\right)^n$. (Received August 24, 2010)