1037-22-245 **Brian C. Hall*** (bhall@nd.edu) and **Kamthorn Chailuek**. *Toeplitz operators on generalized Bergman spaces.* Preliminary report.

Certain Hilbert spaces of holomorphic functions on the unit ball arise in the study of the holomorphic discrete series of the group SU(n,1). In a certain range, the norm on these spaces is an L2 norm, in which case one can define Toeplitz operators by the usual "multiply and project" definition.

We consider extensions of Toeplitz operators to the range where the norm is NOT an L2 norm. Here there is no ambient L2 space in which to perform the projection, but one can define Toeplitz operators by means of analytic continuation in the parameter labeling the representations. We discuss some properties of the resulting Toeplitz operators, which sometimes behave quite differently from ordinary Toeplitz operators. Our key tool is a formula for the Berezin transform in terms of the Laplacian. (Received February 04, 2008)