1134-32-281 **David E. Barrett*** (barrett@umich.edu) and **Luke D. Edholm** (edholm@umich.edu). *The Leray transform on a family of model domains.* Preliminary report.

The domains bounded by

$$S_\beta \overset{\text{def}}{=} \left\{(z_1, z_2) \in \mathbb{C}^2 : \operatorname{Im} z_2 = |z_1|^2 + \beta \operatorname{Re} z_1^2\right\}$$

with $0 \leq \beta < 1$ serve as useful models in the study of the affine or projective geometry of (strongly $\mathbb{C}$-convex) domains.

The Leray transform defined by

$$\mathbb{L}_\beta(f)(z) = \frac{1}{8\pi^2 i} \int\limits_{S_\beta} \frac{f(\zeta)\, d\zeta_2 \wedge d\bar{\zeta}_1 \wedge d\zeta_1}{[(\bar{\zeta}_1 + \beta\zeta_1)(\zeta_1 - z_1) + \frac{i}{2}(\zeta_2 - z_2)]^2}$$

provides an explicit oblique projection operator from $L^2(S_\beta)$ onto the corresponding Hardy space.

The talk will provide an analysis of this operator, including a proof that the opertor norm of $\mathbb{L}_\beta$ is precisely $\frac{1}{\sqrt[4]{1-\beta^2}}$. There will also be a brief discussion of results for the Leray transform on more general domains that we believe can be proved based on the results for S_β. (Received September 09, 2017)