1025-32-209 **David E Barrett*** (barrett@umich.edu), Math Dept, University of Michigan, 530 Church St, Ann Arbor, MI 48109-1043, and **Loredana Lanzani** (lanzani@uark.edu), Dept of Mathematical Sciences, University of Arkansas, Fayetteville, AR 72701. *Essential spectrum of the Leray transform on two-dimensional Reinhardt domains.*

We study spectral properties of the Leray transform

$$\mathbb{L}f(w) = \frac{-1}{4\pi^2} \int\limits_{\zeta \in bD} f(\zeta) \frac{\partial\rho(\zeta) \wedge \overline{\partial}\partial\rho(\zeta)}{(\partial\rho(\zeta)[\zeta - w])^2}$$

on smoothly bounded strictly convex Reinhardt domains in $\mathbb{C}^2$ using smooth rotation-invariant reference measures. The results include an unexpected duality property.

We also include results on domains modeled near the axes on p-balls $|z_1|^p + |z_2|^p < 1$. In this case we allow measures comparable to a power of the Levi form. (Received January 22, 2007)