1113-47-36 **Pamela Gorkin*** (pgorkin@bucknell.edu), Department of Mathematics, Lewisburg, PA 17837, and **Brett Wick** (wick@math.wustl.edu), Department of Mathematics, St. Louis, MO 63130.
Thin sequences, model spaces, and Douglas algebras.

Let (z_n) be a sequence in the open unit disk and T_p an operator taking an H^p function f to the sequence $(f(z_n)(1-|z_n|)^{1/p})$. Shapiro and Shields found conditions for the sequence to be interpolating; e.g, the range $T_p(H^p)$ equals the sequence space ℓ^p and the condition is Carleson's condition:

$$\inf_k \prod_{n\neq k} \left|\frac{z_k - z_n}{1-\overline{z_n}z_k}\right| \geq \delta > 0.$$

We consider interpolating sequences for model spaces, $K_\Theta := H^2 \ominus \theta H^2$, associated with an inner function θ. If we have a sequence for which the restriction of T_2 maps K_θ onto ℓ^2, then T_2 will map H^2 onto ℓ^2. For which sequences can we be sure that if $T_2 : H^2 \to \ell^2$ is surjective, then the restriction $T_2 : K_\theta \to \ell^2$ is surjective?

We answer this for the class of *thin sequences* – interpolating sequences for which $\lim_{k\to\infty} \prod_{j;j\neq k} \left|\frac{z_j - z_k}{1-\overline{z_j}z_k}\right| = 1$. The answer depends on the sequence and the inner function. We also consider the same question for H^∞ and subalgebras of L^∞ that properly contain H^∞. (Received July 29, 2015)