1072-47-91 **Tavan T Trent*** (`ttrent@as.ua.edu`), Dept. of Mathematics, University of Alabama, Tuscaloosa, AL 35487. *The Douglas Property for Multiplier Algebras.*

Let $\mathcal{H}(\Omega)$ denote a reproducing kernel Hilbert space of functions on Ω with multiplier algebra,$\mathcal{M}(\mathcal{H}(\Omega))$. An algebra, $\mathcal{A}$, of $B(\mathcal{H}(\Omega))$ has the *Douglas property* if whenever $A_{ij}, B_{ij} \in \mathcal{A}$ with $[A_{ij}], [B_{ij}] \in B(\bigoplus_{n=1}^{\infty} \mathcal{H}(\Omega))$ with $[A_{ij}][A_{ij}]^* \geq [B_{ij}][B_{ij}]^*$, then there exists $C_{ij} \in \mathcal{A}$ with $[C_{ij}] \in B(\bigoplus_{n=1}^{\infty} \mathcal{H}(\Omega))$ satisfying:

$$\begin{aligned} &(1) \qquad [A_{ij}][C_{ij}] \ = \ [B_{ij}] \\ \text{and} \quad &(2) \qquad \|[C_{ij}]\| \ \leq \ 1. \end{aligned}$$

For a *nice* kernel, McCullough and I have shown

THEOREM: Assume that $\mathcal{H}(\Omega)$ is *nice*. $\mathcal{H}(\Omega)$ has an NP kernel $\Longleftrightarrow$ $\mathcal{M}(\mathcal{H}(\Omega))$ has the *Douglas property*. (Received June 21, 2011)