1077-VL-2545 **Malgorzata M Czerwinska*** (mmczerwi@olemiss.edu), Department of Mathematics, University of Mississippi, University, MS 38677-1848. *Exposed and strongly exposed points in symmetric spaces of measurable operators.*

Let $\mathcal{M}$ be a semifinite von Neumann algebra with a faithful, normal, semifinite trace τ, and E be a symmetric Banach function space on $[0, \tau(\mathbf{1}))$. The symmetric spaces $E(\mathcal{M}, \tau)$ of τ-measurable operators consists of all τ-measurable operators x for which the singular value function $\mu(x)$ belongs to E and is equipped with the norm $\|x\|_{E(\mathcal{M},\tau)} = \|\mu(x)\|_E$.

Let $(X, \|\cdot\|)$ be a Banach space, with the unit sphere and the unit ball denoted by S_X and B_X, respectively. An element $x \in S_X$ is an *exposed point* of B_X if there exists a normalized functional $F \in X^*$ which supports B_X exactly at x, i.e. $F(x) = 1$ and $F(y) \neq 1$ for every $y \in B_X \setminus \{x\}$. If, moreover, $F(x_n) \to 1$ implies $\|x - x_n\| \to 0$ for all sequences $\{x_n\} \subset B_X$, then x is a *strongly exposed point* of B_X and F *strongly exposes* B_X at x.

We will discuss the relationships between exposed and strongly exposed points of the unit ball of an order continuous symmetric function space E, and of the unit ball of the space of τ-measurable operators $E(\mathcal{M}, \tau)$. It is a joint work with Anna Kamińska and Damian Kubiak from the University of Memphis. (Received September 22, 2011)