A GENERALIZATION OF THE BROWN–PEARCY THEOREM

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Abstract. Let $A$ be a unital separable simple exact C*-algebra. Suppose that either
1. $A$ is purely infinite, or
2. $A \otimes K$ has strict comparison of positive elements and stable rank one, and $A$ has unique tracial state.

Then for all $X \in \mathcal{M}(A \otimes K)$, $X$ is a commutator if and only if $X$ does not have the form $\alpha 1_{\mathcal{M}(A \otimes K)} + x$, for some $\alpha \in \mathbb{C} - \{0\}$ and for some $x$ belonging to a proper ideal of $\mathcal{M}(A \otimes K)$.

Keywords and phrases: C*-algebra, commutator, multiplier algebra.

REFERENCES


