1049-47-15 **Thomas Tonev** and **Aaron Luttman*** (aluttman@clarkson.edu), Clarkson University, Division of Mathematics and Computer Science, Box 5815, Potsdam, NY 13699. *Peripheral Multiplicativity and Isomorphisms Between Standard Operator Algebras.*

If X and Y are Banach spaces, then subalgebras $\mathfrak{A} \subset B(X)$ and $\mathfrak{B} \subset B(Y)$, not necessarily unital nor complete, are called *standard operator algebras* if they contain all finite-rank operators on X and Y respectively. The peripheral spectrum of $A \in \mathfrak{A}$ is the set $\sigma_\pi(A) = \{\lambda \in \sigma(A) : \ |\lambda| = \max_{z \in \sigma(A)} |z|\}$ of spectral values of A of maximum modulus, and a map $\varphi \colon \mathfrak{A} \to \mathfrak{B}$ is called *peripherally-multiplicative* if it satisfies the equation $\sigma_\pi\big(\varphi(A) \circ \varphi(B)\big) = \sigma_\pi(A\,B)$ for all $A, B \in \mathfrak{A}$. We show that any peripherally-multiplicative and surjective map $\varphi \colon \mathfrak{A} \to \mathfrak{B}$, neither assumed to be linear nor continuous, is a bijective bounded linear operator such that either φ or $-\varphi$ is multiplicative or anti-multiplicative. This holds in particular for the algebras of finite rank operators or of compact operators on X and Y and extends earlier results of Molnár. (Received January 12, 2009)