WEAK COMPACTNESS OF ALMOST LIMITED OPERATORS

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ABSTRACT

The paper is devoted to the relationship between almost limited operators and weakly compacts operators. We show that if $F$ is a 3c3 – Dedekind complete Banach lattice then, every almost limited operator $T : E \to F$ is weakly compact if and only if $E$ is reflexive or the norm of $F$ is order continuous. Also, we show that if $E$ is a 3c3 -Dedekind complete Banach lattice then the square of every positive almost limited operator $T : E \to E$ is weakly compact if and only if the norm of $E$ is order continuous.