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SVEP AND BISHOP'S PROPERTY FOR $k*$–PARANORMAL OPERATORS

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Abstract. A bounded linear operator T on a complex Hilbert space $\mathscr{H}$ is said to be $k*$-paranormal if $\|T^*x\|^k \leqslant \|T^k x\|$ for every unit vector $x \in \mathscr{H}$ where k is a natural number with $2 \leqslant k$. This class of operators is an extension of hyponormal operators and have many interesting properties. We show that $k*$-paranormal operators have Bishop's property (β), i.e., if $f_n(\lambda)$ is an analytic function on some open set $\mathscr{D} \subset \mathbb{C}$ such that $(T-z)f_n(z) \to 0$ uniformly on every compact subset $\mathscr{K} \subset \mathscr{D}$, then $f_n(z) \to 0$ uniformly on $\mathscr{K}$. In case of $k=2$, this means that $*$-paranormal operators have Bishop's property (β).

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