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ALGEBRAICALLY PARANORMAL OPERATORS ON BANACH SPACES

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ABSTRACT. In this paper we show that a bounded linear operator on a Banach space X is polaroid if and only if $p(T)$ is polaroid for some polynomial p . Consequently, algebraically paranormal operators defined on Banach spaces are hereditarily polaroid. Weyl type theorems are also established for perturbations $f(T + K)$, where T is algebraically paranormal, K is algebraic and commutes with T , and f is an analytic function, defined on an open neighborhood of the spectrum of $T + K$, such that f is nonconstant on each of the components of its domain. These results subsume recent results in this area.

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