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Extreme Points of Certain Subsets of Hermitian Elements in Banach Algebras

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 [Keywords](#)  
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**Abstract:** We consider the real Banach spaces  $H(A)$  of all hermitian elements of a complex Banach algebra  $A$ . We prove that if an even power of a  $\lambda \in N(A)$  is hermitian, then  $\lambda$  is an extreme point of the unit ball of  $H(A)$  if and only if  $\lambda^2 = 1$ . Moreover, if an odd power of a  $\lambda \in H(A)$  is hermitian and  $\lambda$  is an extreme point of the unit ball of  $H(A)$ , then  $\lambda^3 = \lambda$ .

**Key Words:** Extreme points, hermitian elements

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