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**On the open ball centered at an invertible element of a  
Banach algebra.**

**Abstract**

The open ball centered at an invertible element  $a$  of a Banach algebra  $A$ , with radius  $\frac{1}{\|a^{-1}\|}$ , is contained inside the open set of all invertible elements,  $G(A)$  in  $A$ . An invertible element  $a$  of a Banach algebra  $A$  is said to satisfy BOBP (Biggest Open Ball Property) if the boundary of the ball  $B\left(a, \frac{1}{\|a^{-1}\|}\right)$  intersects the set of non invertible elements in  $A$ . We say a Banach algebra  $A$  satisfies BOBP if every  $a$  in  $G(A)$  satisfies BOBP.

The origin of this problem is connected with condition spectra and almost multiplicative functionals. We see that, in general, uniform algebras and  $C^*$ -algebras satisfy BOBP but group algebras need not.

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