

A commutative Banach algebra where 0 is the only nilpotent.

A C^* -algebra is commutative if and only if it has 0 as its unique nilpotent element. This is due to I. Kaplansky.(cf. [I. Kaplansky, Ring isomorphisms of Banach algebras, Canada. J.Math. 6 (1954), 374-381.])