

1023-46-760

**Lawrence G. Brown\*** (lgb@math.purdue.edu), Dept. of Mathematics, Purdue University, W. Lafayette, IN 47907-2067. *MASA's and certain type I closed faces of  $C^*$ -algebras.*

Let  $A$  be a separable  $C^*$ -algebra and  $A^{**}$  its enveloping  $W^*$ -algebra. A result of Akemann, Anderson, and Pedersen states that if  $(p_n)$  is a sequence of mutually orthogonal minimal projections in  $A^{**}$  such that  $\sum_k^\infty p_n$  is closed,  $\forall k$ , then there is a MASA  $B$  in  $A$  such that each  $\phi_n|_B$  is pure and has a unique state extension to  $A$ , where  $\phi_n$  is the pure state of  $A$  supported by  $p_n$ . We generalize this in two ways: It can be required that  $B$  contain an approximate identity of  $A$ , and the countable discrete space underlying the above can be replaced by a totally disconnected space. We consider two types of type  $I$  closed faces, both related to the above, atomic closed faces and closed faces with nearly closed extreme boundary (NCEB). A complement to Glimm's theorem, which may or may not be new, arises from this. One specific question is whether an atomic closed face always has an "isolated point". We give a counterexample for this and also show the answer is yes in the NCEB case. One of our examples is a type  $I$  closed face which is isomorphic to a closed face of every non-type  $I$  separable  $C^*$ -algebra and which is not isomorphic to a closed face of any type  $I$   $C^*$ -algebra. (Received September 21, 2006)