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Scott R Sykes* (ssykes@westga.edu), Department of Mathematics, State University of West Georgia, Carrollton, GA 30118. *Lattice Ordered Effect Algebras*.

An effect algebra is a partial algebra, with an associative, commutative binary operation which admits an identity and an orthosupplementation. Every Effect Algebra E is a partially ordered set where a is defined to be less than or equal to b if and only if there is an element c in E with $c + a = b$. However, it is known that not all partially ordered sets can be organized into an Effect Algebra. The purpose of this talk is to discuss some structural properties of lattice ordered Effect Algebras. We will use these structural properties to rule out certain lattices that cannot be made into Effect Algebras. Finally, using these structural properties, we will show that if L is the face lattice of a convex polytope P and L can be organized into an effect algebra, then every face of P must have exactly three vertices. (Received October 02, 2000)