962-06-1397 **Derek A Smith*** (smithder@lafayette.edu), Math Department, Lafayette College, Easton, PA 18042. *Four-generator partial Boolean algebras in orthomodular lattices.*

In orthodox quantum mechanics, the properties of a quantum mechanical system correspond to the closed subspaces of a Hilbert space. Two properties are said to be compatible if their associated subspaces are orthogonal outside of any intersection. The set of subspaces generated from an initial set S under the operations of orthogonal complement and intersection of compatible subspaces is a partial Boolean algebra $B(S)$ as introduced by Kochen and Specker. Conway and Kochen have exhibited a set T of five subspaces in $\mathbb{C}^4$ that generate an infinite $B(T)$. Here, we show that T has a minimal number of generators by proving that every set S of four elements in any orthomodular lattice of height four generates a finite $B(S)$. (Received October 03, 2000)