1078-06-40 **Joel Adler*** (joel.adler@phbern.ch), Gertrud-Woker-Strasse 5, 3012 Bern, Switzerland. *The model companion of the class of pseudocomplemented semilattices is finitely axiomatizable.*

For a class **K** of algebras A(**K**) and E(**K**) denote its algebraically and existentially closed members. Besides (semantically) determining its members the question whether these classes can be finitely axiomatized is of interest.

In this talk we investigate **PCS**, the class of pseudocomplemented semilattices (pcs), in this respect. We will first show how a finite axiomatization of A(**PCS**) can be obtained using the property: A pcs P is algebraically closed iff every finite subpcs of P can be extended within P to $\underline{2}^r \times (\hat{A})^s$, $\underline{2}$ being the two element Boolean algebra, $\hat{A}$ the countable atomless Boolean algebra with a new top element. This extendability property is described with finitely many first-order sentences.

We will then narrow down existential closedness of a pcs P assuming P is already algebraically closed. A description of this characterization with finitely many formulas together with the above finite axiomatization of A(**PCS**) gives us the finite axiomatization of E(**PCS**). (Received November 07, 2011)