1023-06-785 **M. E. Adams***, Department of Mathematics, State University of New York, New Paltz, NY 12561, and **Jürg Schmid**, , Switzerland. *Minimal extensions of bounded distributive lattices.* Preliminary report.

Trivially, every finite bounded distributive lattice with more than 2 elements contains a proper maximal subalgebra. However, for κ infinite, there are 2^κ non-isomorphic bounded distributive lattices of cardinality κ, none of which have any proper maximal subalgebras.

The dual concept of when a bounded distributive lattice L has a *minimal extension* L' (that is, L is a proper maximal subalgebra of a bounded distributive lattice L') is considered. Minimal extensions always exist, but can only arise in one of two ways, so-called *removing a critical cover* or *splitting a point.* For a finite bounded distributive lattice, removing a critical cover or splitting a point always results in a minimal extension. However, this is not the case when L is infinite. Various possibilities arise, which are shown to vary depending on whether L is countable or uncountable.

Background information leading to these considerations will also be presented. (Received September 21, 2006)