1014-06-1373 **Richard N. Ball*** (rball@math.du.edu), Department of Mathematics, 2360 S. Gaylord, Denver, CO 80208, **Ales Pultr** (pultr@kam.mff.cuni.cz), CZ 11800 Praha 1, Malostranske nam. 25, Czech Rep, and **Jiri Sichler** (sichler@cc.umanitoba.ca), Department of Mathematics, University of Manitoba, Winnipeg, Manitoba R3T 2N2, Canada. *Forbidden quotients of bounded distributive lattices.* Preliminary report.

In this talk we discuss the lattice-theoretical consequences of the authors' recent investigations of forbidden configurations in Priestley spaces. A sample result goes like this. Let $\mathbf{D}$ designate the category of bounded distributive lattices, and for finite $L \in \mathbf{D}$ let $Forb(L)$ designate the class of members of $\mathbf{D}$ which do not have L as a quotient. Insert an annoying technical hypothesis (ATH), namely that the Priestley space of L has a greatest element. Then the following are equivalent. (1) $Forb(L)$ is axiomatizable, i.e., there is a finite set of formulas in the first-order language of $\mathbf{D}$ whose satisfaction is equivalent to membership in $Forb(L)$. (2) $Forb(L)$ is productive. (3) L is relatively normal, i.e., every pair of elements can be disjointified. (4) The Priestley space of L is a tree. The theorem is surely true without the ATH, with requirement (4) replaced by the weaker condition that the Priestley space of L is acyclic. The authors can prove most, but not all, of the general version. (Received September 28, 2005)