1070-05-240 **Hugh Denoncourt*** (Hugh.Denoncourt@Colorado.edu), MN. *A refinement of weak order intervals into distributive lattices.*

The focus of this talk is arbitrary intervals in the weak Bruhat order. One can show that the set of Lehmer codes of permutations in an interval forms a distributive lattice. Furthermore, the rank-generating function of this distributive lattice matches that of the interval. We demonstrate the construction of a poset whose order ideals form a distributive lattice isomorphic to the set of Lehmer codes of the interval. (Received February 13, 2011)