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Columbia, SC 29208. *On chain partitions for quotients of the Boolean lattice.* Preliminary report.

A key ingredient of the construction of symmetric Venn diagrams for  $n$  sets,  $n$  prime, was to construct an appropriate symmetric chain decomposition of the “Necklace Poset”  $N_n$ ,  $n$  prime, in which each element consists of a subset of  $[n] =: \{1, \dots, n\}$  and its cyclic rotations (G.-Killian-Savage 2004). That is,  $N_n$  is the quotient poset  $B_n/Z_n$ , consisting of orbits of the Boolean lattice  $B_n$  under the action of the cyclic group  $Z_n$ . Jordan has recently constructed such a decomposition of  $N_n$  for all integers  $n$ . We should next consider the quotient posets  $B_n/G$  for other subgroups  $G$  of the symmetric group  $S_n$ . (Received March 09, 2008)