1018-05-156 **Mike Develin**, American Institute of Mathematics, Palo Alto, CA 94306-2244, **Jeremy L Martin*** (jmartin@math.ku.edu), Department of Mathematics, University of Kansas, Lawrence, KS 66045-7523, and **Victor Reiner**, School of Mathematics, University of Minnesota, Minneapolis, MN 55455. *Finer rook equivalence and cohomology of Ding's Schubert varieties.*

K. Ding studied a class of Schubert varieties X_λ in type A partial flag manifolds, indexed by integer partitions λ and in bijection with dominant permutations. He observed that the Schubert cell structure of X_λ is indexed by maximal rook placements on the Ferrers board B_λ, and that the integral cohomology groups $H^*(X_\lambda)$, $H^*(X_\mu)$ are additively isomorphic exactly when the Ferrers boards B_λ, B_μ satisfy the combinatorial condition of *rook-equivalence*. We classify the varieties X_λ up to isomorphism, distinguishing them by their graded cohomology rings with integer coefficients. The crux of our approach is studying the nilpotence orders of linear forms in the cohomology ring. (Received March 04, 2006)