1077-05-308 Richard Ehrenborg (jrge@ms.uky.edu), 719 Patterson Office Tower, University of Kentucky, Lexington, KY 40506-0027, and JiYoon Jung* (jjung0328@uky.edu), 719 Patterson Office Tower, University of Kentucky, Lexington, KY 40506-0027. The topology of restricted partition posets.

For each composition \vec{c} we show that the order complex of the poset of pointed set partitions $\Pi_{\vec{c}}^{\bullet}$ is a wedge of $\beta(\vec{c})$ spheres of the same dimensions, where $\beta(\vec{c})$ is the number of permutations with descent composition \vec{c} . Furthermore, the action of the symmetric group on the top homology is isomorphic to the Specht module S^B where B is a border strip associated to the composition \vec{c} . We also study the filter of pointed set partitions generated by knapsack integer partitions and show the analogous results on homotopy type and action on the top homology.

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