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Matthew J Morin^{*} (mjmorin@math.ubc.ca), Department of Mathematics, The University of British Columbia, Room 121, 1984 Mathematics Road, Vancouver, BC V6T 1Z2, Canada. Differences of Augmented Staircase Skew Schur Functions. Preliminary report.

Determining when differences of the form $s_{D_1} - s_{D_2}$ are Schur positive, for skew diagrams D_1 and D_2 , has recently received much interest. We inspect diagrams consisting of staircases with hook diagrams attached to their base. Fixing a particular staircase, we inspect the difference of skew Schur functions between all pairs of such diagrams with equal hook length. We give necessary and sufficient conditions for the difference to be Schur positive and describe the relevant Hasse diagram. (Received August 11, 2008)