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*Jeu-de-taquin promotion and cyclic sieving for semistandard hook tableaux*

Jeu-de-taquin promotion gives a bijection on semistandard  $\lambda$ -tableaux  $CST(\lambda, k)$ , with entries bounded by  $k$ . While, for general shapes, the order of promotion on  $CST(\lambda, k)$  is not known, Rhoades gave the order of promotion on the set of semistandard rectangular tableaux  $CST((c^r), k)$  and proved that  $CST((c^r), k)$  exhibits the cyclic sieving phenomenon (CSP). We determine the order of promotion on the set of semistandard hook tableaux  $CST((n - m, 1^m), k)$  and give a CSP for the set of semistandard hook tableaux with fixed content.