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Brendon Rhoades and **Andy Wilson*** (andwils2@pdx.edu). *Vandermondes in superspace.*

Superspace of rank n is a \mathbb{Q} -algebra with n commuting generators x_1, \dots, x_n and n anticommuting generators $\theta_1, \dots, \theta_n$ which arises in mathematical physics and the study of differential forms. We present a family of extensions of the Vandermonde determinant to superspace and use superspace Vandermondes to construct graded representations of the symmetric group. Our constructions specialize to hook-shaped Tanisaki quotients, the coinvariant ring for the Delta Conjecture constructed by Haglund, Rhoades, and Shimozono, and a superspace quotient related to positroids and Chern plethysm constructed by Billey, Rhoades, and Tewari. We also conjecture connections between these representations and the symmetric function $\Delta'_{e_{k-1} e_n}$ from the Delta Conjecture as well as the Hard Lefschetz Theorem. (Received January 10, 2020)