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Luke Oeding* (oeding@auburn.edu), Department of Mathematics and Statistics, 221 Parker Hall, Auburn, AL 36849. *Border Ranks of Monomials*.

Young flattenings, introduced by Landsberg and Ottaviani, give determinantal equations for secant varieties and provide lower bounds for border ranks of tensors. We find special monomial-optimal Young flattenings that provide the best possible lower bound for all monomials up to degree 6. For degree 7 and higher these flattenings no longer suffice for all monomials. To overcome this problem we introduce partial Young flattenings and use them to give a lower bound on the border rank of monomials which agrees with Landsberg and Teitler's upper bound. (Received August 31, 2016)