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Jang Soo Kim* (kimjs@math.umn.edu), 302 Vincent Hall, 206 Church St. SE, Minneapolis, MN 55455. *Moments of Askey-Wilson polynomials.*

Recently, Kim and Stanton found new formulas for the moment $\mu_n(a, b, c, d; q)$ of Askey-Wilson polynomials. They also found a nice combinatorial formula for the moment when $d = 0$. However, their proof was not combinatorial. In this talk I will explain a combinatorial way to compute the Askey-Wilson moment using an idea in the work of Ismail, Stanton, and Viennot in 1987. Then I will show a new and nicer (in a combinatorial sense) formula for the Askey-Wilson moment which reduces to the formula of Kim and Stanton when $d = 0$. Using this new formula we can prove a positivity conjecture of Kim and Stanton. This is joint work with Dennis Stanton. (Received September 15, 2012)