

1067-11-2000 **F. G. Garvan*** (fgarvan@ufl.edu), Department of Mathematics, University of Florida, PO Box 118105, Gainesville, FL 32611-8105. *Higher order spt-functions.*

Andrews' spt-function can be written as the difference between the second symmetrized crank and rank moment functions. Using the machinery of Bailey pairs a combinatorial interpretation is given for the difference between higher order symmetrized crank and rank moment functions. This implies an inequality between crank and rank moments that was only known previously for sufficiently large n . This combinatorial interpretation is in terms of a weighted sum of partitions. A number of congruences for higher order spt-functions are derived. (Received September 22, 2010)