We revisit a theorem of Andrews on equivalent upper bound sequences of multiplicities, from which the Euler partition theorem on partitions into distinct parts and odd parts can be deduced. By employing Boulet’s four parameter formulas for partitions, we obtain a unification of Bessenrodt’s alternating sum refinement and Andrew’s generalization of the Euler theorem. We also discuss another theorem with upper bounds on even part multiplicities. (Received September 22, 2012)