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**Scott Ahlgren** and **Stephanie Treneer\*** ([stephanie.treeneer@dartmouth.edu](mailto:stephanie.treeneer@dartmouth.edu)). *Rank generating functions as weakly holomorphic modular forms.*

Recent work has shown that many  $q$ -series identities arise naturally from the theory of weak Maass forms. Using results on weak Maass forms due to Bringmann and Ono, we construct several infinite families of rank generating functions which are weakly holomorphic modular forms. In particular, these families explain many classical identities of Atkin and Swinnerton-Dyer, and Atkin and Hussain. (Received September 20, 2007)