

1116-VN-1875 **Nicolas Allen Smoot*** (ns02570@georgiasouthern.edu). *Enumerating the Partitions of the Göllnitz–Gordon Theorem*. Preliminary report.

Nearly a century ago, the mathematicians Hardy and Ramanujan established their celebrated circle method to give an exact asymptotic expression for the unrestricted partition function. Following later improvements by Rademacher, the method was utilized by Niven, Lehner, Iseki, and others to develop rapidly convergent series representations of various restricted partition functions. Following in this tradition, we use the circle method to develop formulæ for counting a restricted class of partitions that arise in the Göllnitz–Gordon identities. We then derive and compare the asymptotic behavior of such formulæ. (Received September 21, 2015)