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Andrew Shallue* (ashallue@iwu.edu) and **Steven Hayman**

(steven.paul.hayman@gmail.com). *Constructing a ten-billion factor Carmichael number.*

We have constructed a Carmichael number with 10,333,229,505 prime factors. This required developing a new subset-product algorithm that utilizes ideas of Kuperberg and exploits the non-uniform distribution of primes p with the property that $p - 1$ divides a highly composite Λ . (Received September 16, 2012)