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Shashank Kanade* (shashank.kanade@du.edu). *Searching for modular companions.*

In a joint work with Matthew C. Russell (Exp. Math., 2015) we found new conjectural integer partition identities of Rogers-Ramanujan type. Three of these identities have mod-9 periodic symmetric products, and they remain unproved. In this talk, I'll provide experimental evidence that this set of conjectures is in some sense "complete". This evidence is based on a necessary condition for modularity of Nahm sums given by Vlasenko and Zwegers. The Nahm sums (or Andrews-Gordon type sums) themselves come from the work of Kurşungöz. Time permitting, I'll also discuss Capparelli's identities. (Received August 30, 2019)