Yufei Zhao* (yufeiz@mit.edu), 3 Ames St, #10, Cambridge, MA 02142. More Sums than Differences Sets and Beyond.

A more sums than differences (MSTD) set is a finite subset S of integers such that |S + S| > |S - S|. We present some new results on MSTD subsets of $\{0, 1, ..., n\}$ that address the following two questions: (1) what proportion of the subsets are MSTD sets? (2) what does a typical MSTD set look like?

In general, our results work for any specification on the number of missing sums and the number of missing differences of S, with MSTD sets being a special case. (Received August 31, 2009)