We present new results on partitions of Steiner equiangular tight frames (ETFs) that satisfy the operator norm bound established by a theorem of Marcus, Spielman, and Srivastava (MSS), which they proved as a corollary yields a positive solution to the Kadison-Singer problem. In particular, we prove that partitions derived from blocks defined by incidence matrices in the construction of ETFs based on $(2, k, v)$-Steiner systems (due to Fickus, Mixon, and Tremain) satisfy the MSS bound and explicitly determine the spectrum of their sum of outer products. (Received September 16, 2018)