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Sumsets of positive relative density subsets of the primes

We will show that, given a subset A of primes with positive upper relative density, $A + A$ must have comparable density in the integers. The proof combines Fourier analytic methods introduced by Green and Green-Tao with an argument of Hamel and Łaba to reduce the problem to a similar one in the multiplicative subgroup of integers modulo a product of small primes, which can be solved by optimising a k th moment estimate. This is joint work with Mariah Hamel.