1067-11-214 **Mitsuo Kobayashi***, Mathematics and Statistics Department, 3801 West Temple Avenue, Pomona, CA 91768. *On the density of abundant numbers.* Preliminary report.

A natural number is called abundant if the sum of its proper divisors does not exceed the number itself. The set of abundant numbers has a positive asymptotic density which has been calculated by Deléglise to be about 0.247. By making some improvements in his method I recently found the density to be about 0.2476. Another natural approach to compute this density is to consider "primitive" members of the sequence, namely those not divisible by any smaller member, and then consider their multiples. However the inclusion–exclusion inherent here threatens to explode. In this talk I will show how to control this explosion to yield a different viable method for computing the density of the abundants. (Received August 05, 2010)