Title: Moments of additive statistics with respect to the Ewens sampling formula

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The additive semigroup of vectors with non-negative integer coordinates endowed with the Ewens probability measure plays an important role as a probabilistic space for many statistical models. In the present paper, we obtain upper estimates of the power moments of additive statistics defined on the semigroup. The statistics are sums of dependent random variables; however, our results have the form of the Rosenthal and von Bahr–Esseen inequalities. The arguments perfected in probabilistic number theory are adopted in the proofs.

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