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*The exponential-like moments of the Boltzmann equation without cutoff.*

We consider the spatially homogeneous Boltzmann equation without the Grad's cutoff assumption in the angular cross section, for the case of variable hard potentials, and study the behavior of summability of fractional moments for its solution, leading to generation and propagation results of the so-called "exponential moments".

More specifically, we provide a new proof of the generation of exponential moments of order up to the rate of potentials with the classical non-cutoff assumption. We also investigate a behavior of exponential moments of order beyond the rate of potentials and for that purpose we introduce Mittag-Leffler moments (which can be understood as a generalization of the exponential moments due to the fact that Mittag-Leffler functions are generalized fractional power series) and prove their propagation. (Received September 15, 2014)