1145-60-1597          **Aurel I Stan\*** (`stan.7@osu.edu`), OSU, Columbus, OH 43210. *A characterization of probability measures in terms of their semi-quantum operators.* Preliminary report.

Given a probability measure on the Borel subsets of $R^d$, having finite moments of all orders, we can construct the joint quantum operators: creation, preservation, and annihilation operators of that measure. Splitting each preservation operator into two halves, and adding one half to the corresponding creation operator, and the other half to the corresponding annihilation operator, we obtain the semi-quantum operators: semi-creation and semi-annihilation operators. We give first a canonical definition of the semi-quantum operators, and then we characterize the polynomially symmetric and polynomially factorisable probability measures in terms of the semi-quantum operators. (Received September 23, 2018)

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