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P. Sundar* (sundar@math.lsu.edu), Department of Mathematics, Lockett Hall, Louisiana State University, Baton Rouge, LA 70803, and **Sergio Albeverio** and **Barbara Ruediger**. *McKean-Vlasov equations with jumps and associated PDEs in statistical physics*. Preliminary report.

McKean-Vlasov equations driven by compensated Poisson random measures are studied in the context of partial differential equations that arise in statistical physics. The existence of weak solutions to such stochastic systems is established, and the marginal (in time) distribution of any solution is shown to be unique. Probabilistic behavior of the solution, in particular cases, will be described. (Received February 02, 2015)