1146-60-66 **Chaohao Pan**, Courant Institute of Mathematical Sciences, New York University, New York, NY 10012, **Bo Li**, Department of Mathematics, University of California, Berkeley, Berkeley, CA 94720, **Chuntian Wang***, Department of Mathematics, University of California, Los Angeles, Los Angeles, CA 90095, **Yuqi Zhang**, Uber Technologies, Inc., San Francisco, CA 94103, **Nathan Geldner**, Centers for Disease Control and Prevention, Atlanta, GA 30341, **Li Wang**, The State University of New York, Buffalo, NY 14260, and **Andrea L Bertozzi**, Department of Mathematics, University of California, Los Angeles, Los Angeles, CA 90095. *Stochastic-statistical modeling of criminal behavior.*

Statistical agent-based models for crime have shown that repeat victimization can lead to predictable crime hotspots (see e.g. M. B. Short, et la, Math. Models Methods Appl. Sci. 18 (2008) 1249-1267.), then a recent study in one-space dimension (S. Chaturapruek et la, SIAM J. Appl. Math. 73 (2013) 1703-1720.) shows that the hotspot dynamics changes when movement patterns of the criminals involve long-tailed Levy distributions for the jump length as opposed to classical random walks. In reality, criminals move in confined areas with a maximum jump length. In this paper, we develop a mean-field continuum model with truncated Levy flights (TLFs) for residential burglary in one-space dimension. The continuum model yields local Laplace diffusion, rather than fractional diffusion. We present an asymptotic theory to derive the continuum equations and show excellent agreement between the continuum model and the agent-based simulations. This suggests that local diffusion models are universal for continuum limits of this problem, the important quantity being the diffusion coefficient. Law enforcement agents are also incorporated into the model, and the relative effectiveness of their deployment strategies are compared quantitatively. (Received January 06, 2019)