HUNT'S HYPOTHESIS (H) FOR THE SUM OF TWO INDEPENDENT LÉVY PROCESSES

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Abstract: Which Lévy processes satisfy Hunt's hypothesis (H) is a long-standing open problem in probabilistic potential theory. The study of this problem for one-dimensional Lévy processes suggests us to consider (H) from the point of view of the sum of Lévy processes. In this paper, we present theorems and examples on the validity of (H) for the sum of two independent Lévy processes. We also give a novel condition on the Lévy measure which implies (H) for a large class of one-dimensional Lévy processes. This talk is based on a joint paper with Wei Sun.