LIMIT THEOREMS FOR SOME CRITICAL SUPERPROCESSES

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Abstract: In this talk I will present some conditional limit theorems for some critical superprocesses $X = \{X_t; t \geq 0\}$. The first result is about the rate of non-extinction. The next result says that, for a large class of functions f, conditioned on non-extinction at time t, the limit, as $t \to \infty$, of $t^{-1}\langle f, X_t \rangle$ exists in distribution. Finally, we also establish, under some conditions, a central limit theorem for $\langle f, X_t \rangle$ conditioned on non-extinction at time t.