**报告摘要[Abstract]：**We consider a critical superprocess with general spatial motion and spatially dependent stable branching mechanism with lowest stable index. We first show that, under some conditions, converges to 0 as and is regularly varying with index. Then we show that, for a large class of non-negative testing functions, the distribution of, after appropriate rescaling, converges weakly to a positive random variable with Laplace transform

This is a joint work with Yan-xia Ren and Renming Song.