Filichkina E. (Lomonosov Moscow State University, Moscow, Russia). **Random walks with absorbing sources.** Consider a continuous-time random walk on the lattice $\mathbb{Z}^d, d \in \mathbb{N}$, with finite variance of jumps. At some lattice points, $\{x_1, \ldots, x_k\}$, $k < \infty$, there are absorbing sources: walking particles that hit these points may die. It is assumed that at the initial moment of time there is one particle at every point of the lattice. The main object of the study is the asymptotic behavior of the number of particles $\mu(t, x)$, $x \in \mathbb{Z}^d$. It is shown that for a recurrent random walk ($d = 1, 2$) the process degenerates, while for a non-recurrent walk ($d \geq 3$) the following limit theorem turns out to be true.

THEOREM. *In the case of a random walk on $\mathbb{Z}^d, d \geq 3$, with $t \to \infty$ for every $x \in \mathbb{Z}^d$ the following relation is true*

$$\mu(t, x) \xrightarrow{d} \xi(x),$$

where $\xi(x) \sim Pois(\lambda(x))$, and the parameter $\lambda(x)$ depends on the location of the absorbing sources $\{x_1, \ldots, x_k\}$ and is expressed through the intensities of the transition probabilities of a random walk and absorption.