Shukhrat M Usmanov* (shukhrat.usmanov@waldorf.edu), Waldorf University, 106 South 6th Street, Forest City, IA 50436. Periodic automorphisms of special flows on Lebesgue space and factors of type $III_0$. Preliminary report.

In the work we consider a contraction of the periodic automorphism $\alpha$ on the Lebesgue space $\{X, \mu\}$ to a periodic automorphism $\alpha_0$ of the Lebesgue space $\{Y, m\}$, where the flow $\{S_t\}$ on $\{X, \mu\}$ is a special flow, constructed from the ergodic automorphism $T$ on Lebesgue space $\{Y, m\}$. In the assumption that $\alpha$ and $\{S_t\}$ are commuting for any $t$, we prove that $\alpha_0$ and $T$ commute, too. We will use the construction of a contraction $\alpha_0$ for building of the discrete decomposition of real factors of type $III_0$. (Received September 23, 2017)