1120-37-104 **Semyon Litvinov*** (sbn2@psu.edu), 76 University Drive, Hazleton, PA 18202, and **Vladimir Chilin** (vladimirchil@gmail.com), Vuzgorodok, Tashkent, 700095, Uzbekistan. *Individual Ergodic Theorem in Non-commutative Orlicz Spaces.*

Let (Ω, μ) be a sigma-finite measure space. A classical Orlicz space $L^\Phi = L^\Phi(\Omega, \mu)$ associated with an Orlicz function Φ is a natural generalization of an L^p-space, $1 \leq p < \infty$, for which $\Phi(u) = u^p$, $u \geq 0$. It is known that for a wide class of Orlicz functions Φ and a Dunford-Schwartz operator $T : L^1 + L^\infty \to L^1 + L^\infty$, the inclusion $T(L^\Phi) \subset L^\Phi$ holds, and Dunford-Schwartz individual ergodic theorem follows from its validity for the space $L^1(\Omega, \mu)$. We consider a non-commutative Orlicz space $L^\Phi(\mathcal{M}, \tau)$ associated with a semi-finite von Neumann algebra $\mathcal{M}$, a faithful normal semi-finite trace τ on $\mathcal{M}$ and an Orlicz function Φ satisfying $(\delta_2, \Delta_2)-$condition and establish a non-commutative version of Dunford-Schwartz individual ergodic theorem for $L^\Phi(\mathcal{M}, \tau)$. (Received February 16, 2016)