1145-34-2623 **Ateq Alsaadi*** (ateq.alsaadi@bison.howard.edu), Mathematics Department, Howard University, Washington, DC 20059, and **Faina Berezovskaya**. *Power asymptotics of orbits of a Kolmogorov type polynomial vector field with a fixed Newton polyhendron.* Preliminary report.

Using the Newton polyhendron method we consider asymptotics of trajectories in a vicinity of isolated equilibrium $O\left(0,0,0\right)$ of a polynomial vector field $V\left(X_1,X_2,X_3\right)$ defined by the system of ordinary differential equations with the right hands: $X_1\left(\bar{x}\right)\equiv x_1P\left(\bar{x}\right),\quad X_2\left(x\right)\equiv x_2Q\left(\bar{x}\right),\ X_3\left(\bar{x}\right)\equiv x_3R\left(\bar{x}\right)$, where $\bar{x}=\left(x_1,x_2,x_3\right)$. Newton polyhedron Γ_{000} is associated with V. **Theorem**. Any orbit of $V\left(\bar{x}\right)$ that tends to O for $t\rightarrow\ \infty$ or $t\rightarrow\ -\infty$ in phase coordinates $\left(x_1,x_2,x_3\right)$ has either power or trivial asymptotics

$$x_2=k_1x_1^{\rho_1}\left(1+o\left(1\right)\right),x_3=k_2x_1^{\rho_2}\left(1+\mathrm{o}\left(1\right)\right),\quad \rho_1,\ \rho_2>0,$$

where $\left(\rho_1,\ \rho_2\right)$ is a vector-index of Newton polyhedron Γ_{000} , k_1,k_2 are constants. (Received September 25, 2018)