



## **Evolution of axis rotation of exoplanet in disk**

**I. Kitiashvili**

Kazan state university (Irina.Kitiashvili@ksu.ru/+78432924454)

On early stage forming planetary system the gravitational and tidal interaction of a planet and disk are essential. The process of planetary formation significantly determine by the orbital-rotational characteristics of the planet. The rotation of the extra-solar planet characterizes by the position of the kinetic momentum vector in space and determines by gravitational, tidal and magnetic interactions of an exoplanet and protoplanetary disk. We model evolution of the vector kinetic momentum of exoplanets on early stage of formation planetary system under action tidal and gravitational interaction between gaseous exoplanet and disk. We have received various regimes of axis rotation evolution of planets for different values of parameters. The gallery of phase portraits shows the scenarios of cosmogonical evolution of the young exoplanet.