

In the present work we study the properties of accretion tori orbiting black hole. Our approach to this problem comes from the solving of general relativistic magnetohydrodynamic equations, which follow from conservation of the energy-momentum tensor, the particle number and from Maxwell's equations. We solve these equations by numerical methods which are described in Chapter 1. The formalism of tori which we consider here is described in Chapter 2. We are interested in tori with constant density of angular momentum and Fishbone-Moncrief tori mainly. We study accretion rates in these tori when the mass of black hole is increased suddenly and so the equilibrium in the torus is corrupted. For tori with constant density of angular momentum we study the influence of the presence of toroidal magnetic field on accretion rates.