

Spectral features of the anisotropic part of Hamiltonian entering the quantum dynamics of the Mixmaster universe will be presented: asymptotic expressions for the energy spectrum in the limit of large and small volumes of the universe, threshold condition between both regimes, purely discreteness of the spectrum for any volume of the universe. I will further explain how the covariant Weyl-Heisenberg integral quantization applied to the Bianchi IX anisotropy Hamiltonian leads to a potential well approximated by a Toda system, which is known to be classically integrable.