Quantum gravitational inflationary scenario in Bianchi-I space-time BRAJESH GUPT, PARAMPREET SINGH, Louisiana State University, Baton Rouge — We investigate the inflationary scenario in Bianchi-I anisotropic spacetime in the effective description of loop quantum cosmology (LQC). We discuss important differences between the inflationary evolution of LQC and classical theory. We also explore the effects of the anisotropic shear and initial conditions on the amount of inflation. We find that, unlike in the classical theory, the amount of inflation in LQC inflationary Bianchi-I spacetime does not vary monotonically with increasing shear. The attractor behavior of the dynamical trajectories of Bianchi-I LQC spacetime is also studied. In deep Planck regime, LQC trajectories show distinctly different attraction behavior than classical trajectories.

Brajesh Gupt
Louisiana State University, Baton Rouge