**An evolution of Radiative Instability of Rotating Quantum Plasma incorporating Cosmic and Ohmic Diffusion**

R. K. Pensia, S. Mansuri, M. Pensia, A. K. Patidar and D. L. Sutar

The consequences of the cosmic ray (CR) diffusion, on gravitational instability, including uniform rotation and finite electrical resistivity have been studied. To analyze the problem, the magnetohydrodynamic fluid method is taken into consideration. A dispersion relation is developed from the linearization process and normal mode analysis. Which is modified by the quantum parameter, rotation, CR diffusion, and finite electrical resistivity. The subsequently described dispersion relation is used to derive the gravitational instability which is further discussed. The current results are useful in understanding how CR diffusion affects rotating quantum plasma instability in the presence of limited electrical resistance.