**Effect of Inertia and thermal radiation on Jeans Instability of gaseous plasma**

A.Hussain1, S.L. Patel1, R.K. Pensia2 , P.Jeriya1

1 Research Scholar Pacific Academy of Higher Education and Research University, Udaipur (Raj.) 313001 India

2 Department of Physics, S.R.J.Govt. PG Girls College, Neemuch (M.P.) 458441 India

Corresponding author’s email:- asif110889@gmail.com

**Abstract-** In this paper we report the role of electron Inertia and thermal radiation on the Jeans instability of thermally conducting gaseous plasma in the presence of magnetic field under the influence of thermal radiation. A mathematical model of the system is staled and with the help of linearized perturbed equation, the general dispersion relation is driven with using normal mode analysis. The general dispersion relation is reduced for different cases. The Jeans criteria of instability are checked in every mode of propagation. We found that Jeans criteria of gravitational instability is modified by electron Inertia.

**Key Words-** electron Inertia,Jean Instability, Magnetized plasma, Thermal radiation