

## **EFFECT OF ROTATION AND SUSPENDED PARTICLES ON THE STABILITY OF JEFFREY FLUID IN A POROUS MEDIUM**

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### **ABSTRACT**

*An incompressible Jeffrey fluid heated from below in a porous medium, stability is taken into consideration, as well as how rotation and suspended particles may impact it. A normal mode analysis method has been used to create and quantitatively solve the dispersion relation. While the suspended particles are shown to destabilize stationary convection, rotation is found to assist stabilize the system. It is discovered that, depending on the situation, the medium permeability and the Jeffrey parameter can either stabilize or destabilize the system. The effects of rotation, suspended particles, Jeffrey parameter and medium permeability have all been depicted in graphs.*

**KEYWORDS:** *Rotation, Suspended Particles, Jeffrey Fluid, Porous Medium*

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