

**EFFECT OF SUSPENDED PARTICLES IN A LAYER OF
KUVSHINISKI FERROFLUID THROUGH
A POROUS MEDIUM HEATED FROM BELOW**

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Abstract: The purpose of this paper is to study the effects of suspended particles, magnetization and medium permeability in a layer of Kuvshiniski ferrofluid when this layer is heated from below. In this paper, a linear stability theory and normal mode technique is used to find the dispersion relation. In case of stationary convection, it is found that both medium permeability and suspended particles have destabilizing effect on the system. Also, magnetization has a stabilizing effect on the system. Furthermore it is also found that the Principle of exchange of stabilities is satisfied for the present problem under certain conditions.

Keywords and Phrases: Thermal instability, Kuvshiniski Ferrofluid, Suspended particles, Magnetization, Porous medium.

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