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Unsteady MHD Thin Film Flow of a Third-Grade Fluid with Heat Transfer and Slip Boundary Condition Down an Inclined Plane

Authors : Y. M. Aiyesimi, G. T. Okedayo, O. W. Lawal

Abstract : An investigation is made for unsteady MHD thin film flow of a third grade fluid down an inclined plane with slip boundary condition. The non-linear partial differential equation governing the flow and heat transfer are evaluated numerically using computer software called Maple to obtain velocity and temperature profile. The effect of slip and other various physical parameter on both velocity and temperature profile obtained are studied through several graphs.

Keywords : non-Newtonian fluid, MHD flow, third-grade fluid, Maple, slip boundary condition, heat transfer
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