

# Influence of Thermal Radiation on the Unsteady Mixed Convection Flow of a Jeffrey Fluid over a Stretching Sheet

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Z. Naturforsch. **65a**, 711 – 719 (2010); received August 26, 2009 / revised November 21, 2009

This study is concerned with the effect of thermal radiation on the unsteady mixed convection flow of a Jeffrey fluid past a porous vertical stretching surface. The arising problems of flow and heat transfer are solved analytically by employing homotopy analysis method (HAM). It is observed that the flow field is influenced appreciably by the unsteadiness parameter  $\zeta$ , suction parameter  $S$ , mixed convection parameter  $\lambda$ , Deborah number  $\beta$ , Prandtl number  $Pr$ , and the radiation parameter  $Nr$ . Our performed computations depict that the heat transfer rate is increased with increasing values of  $Pr$ ,  $Nr$ , and  $\zeta$ .

*Key words:* Series Solution; Jeffrey Fluid; Heat Transfer.