

International J. of Math. Sci. & Engg. Appls. (IJMSEA)
ISSN 0973-9424, Vol. 5 No. IV (July, 2011), pp. 293-310

**EFFECT OF COUPLE STRESS ON THE UNSTEADY
CONVECTIVE DIFFUSION OF ATMOSPHERIC AEROSOLS IN
THE PRESENCE OF ELECTRIC FIELD**

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Abstract

The Taylor dispersion model is used to obtain exact solution for unsteady convective diffusion in the presence of couple stress. The effect of electric field on the most dominant dispersion coefficient is clearly depicted. The flow equations for couple stress fluid, Maxwell's equation for the electric field, the charge continuity equation and particle concentration equation are solved to obtain a complete solution for the present case.

Key Words : *Couple stress fluid, Electrodes, Taylor dispersion.*

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