

Title of Article: One-Step Implicit Hybrid Block Method for the Direct Solution of General Second Order Ordinary Differential Equations.

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Abstract: A one-step implicit hybrid block solution method for initial value problems of general second order ordinary differential equations has been studied in this paper. The one step method is augmented by the inclusion of off step points to enable the multistep procedure. This guaranteed zero stability as well as consistency of the resulting method. The convergence and weak stability properties of the new method have been established. Results from the new method compared with those obtained from existing methods show that the new method gives better accuracy.