

Title of Article: On a block integrator for the solution of first Order ordinary differential equations.

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Abstract: An efficient one step Adam type implicit block numerical algorithm developed by simultaneous employment of interpolation and collocation techniques is proposed in this paper. Non mesh points were introduced to upgrade the order of consistency and improve the rate of convergence of the method. Further analysis revealed a wide interval of absolute stability. The method is implemented as a block to improve efficiency and reduce computational cost. Comparison of the new method with previous methods in terms of absolute errors of approximation established an improvement over those methods.