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GAUSSIAN DIRECT QUADRATURE METHODS FOR DOUBLE DELAY VOLTERRA INTEGRAL EQUATIONS*

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Abstract. In this paper we consider Volterra integral equations with two constant delays. We construct Direct Quadrature methods based on Gaussian formulas, combined with a suitable interpolation technique. We study the convergence and the stability properties of the methods and we carry out some numerical experiments that confirm our theoretical results.

Key words. Volterra integral equations, Direct Quadrature method, Gaussian quadrature formulas, convergence, stability

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