Joint estimates of quasi-integrals of three-dimensional skewsymmetric linear differential systems

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Abstract

We prove that the estimates earlier obtained by the authors for the deviations of quasi-integrals of a nonstationary three-dimensional linear differential system with continuously differentiable skew-symmetric coefficient matrix from the corresponding integrals in the stationary case, which are attainable on different nontrivial solutions of the system, are not simultaneously attainable on any single nontrivial solution and at the same time. In the course of proof, we establish new estimates, which are more accurate than those obtained earlier in Mem. Differential Equations Math. Phys., 2007, vol. 41, pp. 157–162. The suggested method for constructing such estimates is also of interest.