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# ON A BOUNDARY VALUE PROBLEM FOR EQUATIONS WITH MULTIPLE CHARACTERISTIC

## Abstract

*In the paper, for a fourth order differential equation we study existence domains of fundamental system of solutions for large values of the spectral parameter in the case when the representations of solutions contain fractional powers of the parameter both in the exponent's index and in the multiplier of the exponent at the assumption that the appropriate principal characteristic polynomial has two different roots with definite multiplicities. A class of generalized regular solutions of boundary conditions for which it holds a formula of expansions in eigen functions, is distinguished.*