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ON A DOUBLE BOUNDARY LAYER IN A NONLINEAR BOUNDARY VALUE PROBLEM

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A nonlinear second order differential equation with a small parameter at derivatives is considered in the case when the limiting algebraic equation has a multiple root. The matching method is applied to construct an asymptotic expansion for the solution of the boundary value problem. Two boundary layer variables with different scale are used to describe the asymptotic solution near the boundary.

Keywords: nonlinear equation, small parameter, asymptotics, boundary layer, matching method.

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