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Geometric Aspects of Sturm-Liouville Problems Space of Boundary Conditions for Left-Definiteness.

Consider an arbitrary regular Sturm-Liouville equation with positive leading coefficient and indefinite weight function. We explicitly describe the self-adjoint boundary conditions such that the Sturm-Liouville problems consisting of the differential equation and these boundary conditions are left-definite. The description uses only the value of the fundamental matrix solution of the differential equation at the right endpoint of the interval of the differential equation when the spectral parameter equals zero. (Received September 15, 2000)