

Another billiard problem

S.V. Bolotin (*Moscow Steklov Mathematical Institute RAS, Moscow*)

In the works of S. Dobrokhotov with coauthors on the quasiclassical approximation for the degenerate wave equation there appeared the problem of studying the geodesic flow of a Riemannian metric which tends to infinity at the boundary of a domain. After regularization the problem is reduced to studying a degenerate Birkhoff billiard. We obtain a normal form of the regularized geodesic flow near the boundary and prove a version of Lazutkin's theorem for the corresponding billiard map.

This is a joint work with D. Treschev.