

Weyl Law for Signed Counting Function of Positive Interior Transmission Eigenvalues

Boris Vainberg

UNC - Charlotte, USA

Abstract.

We consider the interior transmission eigenvalue (ITE) problem, which arises when scattering by inhomogeneous media is studied. The ITE problem is not self-adjoint. We show that positive ITEs are observable together with plus or minus signs that are defined by the direction of motion of the corresponding eigenvalues of the scattering matrix (when the latter approach $z=1$). We obtain a Weyl type formula for the counting function of positive ITEs, which are taken together with ascribed signs.

These are joint results with E. Lakshtanov.

.