

Boundary triplets and a result of Jost and Pais: An abstract approach

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In 1951 was published by R. Jost and A. Pais (Phys. Rev.82, 840-851, 1951), a remarkable paper which relates the so-called Jost solution of the scattering problem for Schrödinger operators in 1D with a certain perturbation determinant. The result was generalized by F. Gesztesy, M. Mitrea and M. Zinchenko very recently to higher dimensions in a series of papers. We give an abstract version of this result in the framework of boundary triplets for symmetric operators. The main ingredients are the notions of perturbation determinant for extensions and of the abstract Weyl function both defined in this framework. The talk is based on a common work with M. Malamud from Donetsk (Ukraine).