Neumann Comparison Results in Cylindrical Domains

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Abstract. We consider the question: To what extend does the Weyl function (i.e., the abstract Dirichlet-to-Neumann map) see the same singularities as the resolvent of some restriction of the maximal operator. The proper, so-called detectable, subspace will be introduced and analyzed for particular examples, such as, Schrödinger operators, Hain–Lust operators, and (if time permits), the Friedrichs model operator. The analysis is closely related to modern complex analysis and particularly, the theory of Hankel and Toeplitz operators.