Einladung zum

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Microwave experiments in open billiards

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A decade after the first application of microwave techniques to the study of chaotic billiards microwave experiments have become a standard tool in quantum chaos research. In the talk a number of recent results in open systems will be presented. According to the Landauer formula the conductance through a quantum dot is proportional to the total transmission. Since this quantity is directly available from a microwave experiment, such an approach is ideally suited to check theoretical predictions on transmission distributions. For chaotic cavities there are clear-cut predictions from random-matrix theory on the channel number dependence of the transmission distribution. Systems with and without time-reversal symmetry should be easily discernible as well. In the experiment time-reversal symmetry can be broken by introducing ferrites into the system. Thus detailed tests of theory become possible, which would have been hardly accessible by any other method.

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