

Meeting: 1003, Atlanta, Georgia, SS 4A, AMS-SIAM Special Session on Theoretical and Computational Aspects of Inverse Problems, I

1003-34-752 **Rudi Weikard*** (rudi@math.uab.edu), Department of Mathematics, University of Alabama at Birmingham, Birmingham, AL 35294-1170, and **Marco Marletta** (MarlettaM@cardiff.ac.uk), Cardiff School of Mathematics, Cardiff University, CF24 4AG Cardiff, Wales. *On the stability of the Borg-Levinson problem.* Preliminary report.

The Borg-Levinson theorem states that two complete sets of eigenvalues for a Schrödinger equation on a compact interval determine the potential uniquely. In a practical setting one can expect only to know a finite number of eigenvalues. We are investigating here what information about the potential can be obtained from such incomplete data. (Received September 29, 2004)