1057-81-463　　　　　**Alexander Elgart*** (`aelgart@vt.edu`), Virginia Tech, Blacksburg, VA 24061. *An Adiabatic Theorem for Resonances*

We prove a robust extension of the quantum adiabatic theorem. The theorem applies to systems that have resonances instead of bound states, and to systems for which just an approximation to a bound state is known. To demonstrate the theorem's usefulness in a concrete situation, we apply it to shape resonances. This is a joint result with G. Hagedorn. (Received February 01, 2010)

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