

Asymptotic Completeness Below the Two-Boson Threshold of the Translation Invariant Nelson and Polaron Models

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We present some recent results on a class of models including the massive translation invariant Nelson model and the Polaron model of H. Fröhlich. The results are valid for arbitrary values of the coupling constant, and include absence of singular continuous spectrum below the two-boson threshold as well as a partial asymptotic completeness result, valid for the model restricted to the associated subspace. As a by-product, we get a so-called geometric asymptotic completeness result, which holds for the full model. The talk is based on joint work with Jacob Schach Møller.