

ON THE CLOSURE OF THE DISCRETE SPECTRUM OF NUCLEARLY PERTURBED OPERATORS

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Abstract. Let Z_0 be a bounded operator in a Banach space X with purely essential spectrum and K a nuclear operator in X . Using methods of complex analysis we study the set of accumulation points of the discrete spectrum of the operator $Z := Z_0 + K$. We formulate conditions for Z to exclude certain points or subsets of the essential spectrum of Z to be accumulation points of the discrete spectrum. These results are applied to the operator of multiplication perturbed by integral operators with continuous kernel and to the discrete Laplacian perturbed by nuclear Jacobi operators.

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