
EFFECTIVE OPERATORS ON AN ATTRACTIVE MAGNETIC EDGE

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The semiclassical Laplacian with discontinuous magnetic field is considered in two dimensions. The magnetic field is sign changing with exactly two distinct values and is discontinuous along a smooth closed curve, thereby producing an attractive magnetic edge. Various accurate spectral results are established by means of a microlocal dimensional reduction allowing to deal with the discontinuity of the field.

This is a work in collaboration with S. Fournais, A. Kashmar and N. Raymond.