

Yu. V. Egorov, V. A. Kondrat'ev. **Estimates of the negative spectrum of an elliptic operator**
// Nelinejnye granichnye zadachi (Nonlinear Boundary Value Problems). – 1989. – **1**. – p. 47-48.

For the operator

$$(-\Delta)^m - V(x),$$

some estimates of the dimension of the space of its eigenfunctions corresponding to the negative eigenvalues are given. The results obtained generalize well-known theorem by M. Tsvinkel, E. Lieb and G. V. Rosenblum. For example, if $n > 2m$, $q \geq \frac{n}{2m}$, the following estimate holds:

$$N \leq mc_{n,q} \int V(x)^q |x|^{2mq-n} dx, \text{ where } V_+(x) = \max(0, V(x)).$$