
Erratum to the paper: *Lech Zielinski* Wave operators of Deift-Simon type for a class of Schrödinger evolutions. I

(Matematicheskaya fizika, analiz, geometriya, 1996, v. 3, No. 1/2, p. 169–213)

The plan of the paper was to present the main idea on a very simple example before passing to general hypotheses in Section 6. This was the reason for the sentence saying:

”In Sections 2 and 3 we make the additional assumption (2.3) that $|p(\xi)| \rightarrow \infty$ when $|\xi| \rightarrow \infty, \dots$ ”.

Unfortunately, the second part of this sentence (below (2.3)) is formulated in a wrong way. The correct formulation of the entire sentence should be:

”In Sections 2 and 3 we make the additional assumption (2.3) that $|p(\xi)| \rightarrow \infty$ when $|\xi| \rightarrow \infty$ and we assume also that $\text{Ran } E_{[-\bar{r}; \bar{r}]}(H) \subset \mathcal{K}$ for every $\bar{r} > 0$, which will simplify the exposition”.

The author would like to beg pardon for all possible confusion caused by the above mistake and to add that the choice $\mathcal{K} = H^\infty(\mathbf{R}^d)$ imposes great restrictions on V (e.g., in the case of multiplication by a function all its derivatives must be bounded), but making this assumption gives a clear sense to all following computations, which was the principal aim of this part of the paper.

For a reader interested in weakening the hypotheses, Remark 2 below Theorem 1.1 promises the second part of the paper (in preparation), explaining, e.g., how the condition $|p(\xi)| \rightarrow \infty$ for $|\xi| \rightarrow \infty$ allows to omit (\mathbf{H}_1) . Yet this point is quite easy to see, e.g., by applying the compactness of $h(H_1) - h(H_0)$ similarly as in Section 5. It allows to replace $g_j(\nabla p(D))$ by $g_j(\nabla p(D))\gamma(D)$ with $\gamma \in C_0^\infty(\mathbf{R}^d)$, $\gamma \geq 0$ in (5.6), (5.7) and it remains to put $\gamma(D)$ in front of every operator being a function of $\nabla p(D)$ in Sections 2–4 (with $\mathcal{K} = D(H_0)$).