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**Addendum “Complex transformation method and resonances in one-body quantum systems”**

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## ADDENDUM

### « Complex transformation method and resonances in one-body quantum systems »

(Ann. Inst. Henri Poincaré, t. XLI, n° 1, 1984, p. 103-114).

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(1) Condition (3.8) must be replaced by the following condition

$$|f(\zeta)| < C |\zeta| (1 + \|\operatorname{Re} \zeta\|)^{-\alpha} \quad \text{for some } \alpha > 1 \quad (*)$$

This change does not effect the estimates. Indeed, the inequality (9.8) as it stands was used only in the proof of the statement  $\operatorname{Image} \varphi_{iy} \in \Lambda_{\delta, \alpha}$  (which is not used in the paper anyway) from lemma 3.3. In the proof of the other statements of this lemma we used only that  $|f(\zeta)| < C |\zeta|$ . To prove that  $\operatorname{Image} \varphi_{iy} \in \Lambda_{\delta, \alpha}$  using (\*), one must apply the inequality

$$\sup_{0 \leq s \leq y} |\varphi_{is}(p)| \leq 3 \|\operatorname{Re} \varphi_{iy}(p)\| \quad (**)$$

(instead of

$$\sup_{0 \leq s \leq y} \|\operatorname{Re} \varphi_{is}(p)\| \leq 3 \|\operatorname{Re} \varphi_{iy}(p)\|.)$$

(\*\*) follows from eqn (3.13) and the estimate standing after (3.14).

The author is grateful to H. Cycon for pointing out that the condition (3.8) for a function  $f$  analytic in the tube (3.7) implies  $f \equiv 0$ . On the other hand,  $f(\zeta) = \zeta(1 + \|\zeta\|^2)^{-1}$  obeys the new condition (\*).

(2) Independently, the generator  $D_f$  was introduced and applied to studying the Schrödinger operators in H. Cycon and P. Perry, Local time-decay of high energy scattering states for the Schrödinger equation, Preprint, Technische Universität Berlin. The author is grateful to H. Cycon for pointing this out to him.