List of known typos in Geometric and Obstacle Scattering at Low Energy
by A.Strohmaier and A. Waters, CPDE 45(11):1-61, 2020

`Last updated 18.03.2022`

Clarification about the notation:

- throughout the paper the differential forms need to be understood as complex-valued. So $\Lambda^p T^* M$ needs to be read as $\Lambda^p_{\mathbb{C}} T^* M = \Lambda^p T^*_{\mathbb{C}} M$.
- we used the following notations for the manifold with boundary M. Whereas $H^s_{\text{comp}}(M_{\text{int}})$ and $H^s_{\text{loc}}(M_{\text{int}})$ we have used for the <u>closed</u> set M the convention $H^s(M) = H^s(M_{\text{int}})$ for $s \geq 0$ and for $s < 0$ the space $H^s(M)$ is the dual of $H^{-s}(M_{\text{int}})$. The latter is sometimes denoted as the set of supported Sobolev functions. It includes distributions with support on ∂M.

List of typos:

(1) In Theorem 1.11 the bound for $d = 2$, $p = 0$ or $p = 2$ on A_λ should be $\|A_\lambda\|_{L^2 \to H^s} = O(\frac{1}{|\log(\lambda)|})$ as in Cor 4.3. and not $\|A_\lambda\|_{L^2 \to H^s} = O(\frac{\lambda}{|\log(\lambda)|})$.

(2) In the first paragraph of Section 3 the meromorphic H^s_{comp} and not H^s_0

(3) as indicated in the text above Corollary 2.8 is meant to be a statement about $A(\lambda)$ near zero, so the the text should say holomorphic family of bounded operators *near zero*, and Hahn-holomorphic family of bounded operators *near zero*.

(4) in last sentence of the proof of Lemma 2.9 it should say is *analytic near the real line with zero removed* instead of *analytic near the real line*

(5) The integral in the first displayed formula at beginning of the proof of Th 6.1 should be from 0 to ∞ and the factor should be $1/(2\pi)$.

(6) In the proof of Theorem 2.13 is should say $s_1, s_2 \geq 0$ instead of $s_1, s_2 \in \mathbb{R}$. The proof uses without much explanation that the domain of the operator $(\Delta_{\text{rel}} + 1)^{s_1}$ is pinched between the compactly supported Sobolev space in M_{int} spaces and the local Sobolev spaces $H^s_{\text{loc}}(\overline{M})$ as well as boundary regularity for these operators.

(7) In Theorem 1.13 the factor α_1 should be $-\frac{2^{-1-d}d^2}{\Gamma(1+d/2)^2}$.

(8) In Lemma 6.2 there is an f missing in the integral in the fourth bullet point and the exponent in the lambda power has an incorrect sign.

(9) Lemma 2.9 is missing an R^{ℓ_ν} in both O-terms and the statement that for uniformity in μ the R depends only on the compact subset chosen.

(10) In the estimate of Lemma 2.10 it should say $R^{\ell_\nu + \ell_\mu}$ instead of R^{ℓ_ν}.

School of Mathematics, University of Leeds, Leeds , Yorkshire, LS2 9JT, UK
Email address: `a.strohmaier@leeds.ac.uk`

University of Groningen, Bernoulli Institute, Nijenborgh 9, 9747 AG Groningen, The Netherlands
Email address: `a.m.s.waters@rug.nl`