Erratum
Y. Kurylev, M. Lassas, and G. Uhlmann. Rigidity of broken geodesic and inverse problems. Amer. J. Math. 132(2010), 529–562.

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The proof of Lemma 2.4 on the page 538, and definitions before it need be modified in the following way.

On the page 538, lines 4-5, one consideres the case where $z \in \partial M$ and $s > \tau_f(z)$, that is, s is larger than the focal distance $\tau_f(z)$ of the geodesic $\gamma_{z,\nu}$ emanating normally from the boundary point z. In the paper it was stated that then there are sequences $z_n \to z$, $z_n \neq z$, $s_n \to \tau_f(z)$, and $t_n \to \tau_f(z)$, such that

$$\gamma_{z,\nu}(s_n) = \gamma_{z_n,\nu_n}(t_n), \quad \nu_n = \nu(z_n).$$

However, it is not clear if such sequences exists, and the above statement need be modified as follows: There are sequences $z_n \to z$, $z'_n \to z$, $z_n \neq z'_n$, $s_n \to \tau_f(z)$, and $t_n \to \tau_f(z)$, such that

$$\gamma_{z_n,\nu_n}(s_n) = \gamma_{z'_n,\nu'_n}(t_n), \quad \nu_n = \nu(z_n),\ \nu'_n = \nu(z'_n).$$

Such sequences exists by Klingenberg [28], Theorem 2.1.12.

Moreover, the Definition 2.3 on the page 538 needs to be modified. There, it was defined that $s \in S(z)$ if there are sequences $z_n \to z$, $z_n \in \partial M$, $z_n \neq z$, $T_n \to 2s$ such that $(z_n, \nu_n) R_{T_n} (z, \nu)$.

This definition needs be modified as follows: $s \in S(z)$ if there are sequences $z_n \to z$, $z'_n \to z$, where $z_n, z'_n \in \partial M$, $z_n \neq z'_n$, and $T_n \to 2s$ such that $(z_n, \nu_n) R_{T_n} (z'_n, \nu'_n)$.

Finally, in the proof of Lemma 2.4 the formula (10) needs to be replaced by

$$\gamma_{z_n,\nu(z_n)}(s_n) = \gamma_{z'_n,\nu(z'_n)}(s'_n), \quad s_n \to s,\ s'_n \to s,\ z_n \to z,\ z'_n \to z,\ z_n \neq z'_n.$$

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