

## Inverse spectral problem for quantum graphs

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## Corrigendum

### Inverse spectral problem for quantum graphs

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The algebraic multiplicity of the eigenvalue  $E = 0$  calculated in lemma 1 is in fact equal to  $N - M + 2$ . One has to take into account that the sums of the amplitudes of all incoming and outgoing waves for every edge are equal, which gives additional  $M - 1$  conditions on the amplitudes  $a_j$ . Hence the trace formulas (21) and (22) read as follows:

$$\begin{aligned} u(k) &\equiv \delta(k) + \sum_{n=1}^{\infty} (\delta(k - k_n) + \delta(k + k_n)) \\ &= -(N - M + 1)\delta(k) + \frac{\mathcal{L}}{\pi} + \frac{1}{2\pi} \sum_{p \in \mathcal{P}} (\mathcal{A}_p e^{ikl(p)} + \mathcal{A}_p^* e^{-ikl(p)}) \end{aligned} \quad (21)$$

and

$$\begin{aligned} \hat{u}(l) &\equiv 1 + \sum_{n=1}^{\infty} (e^{-ik_n l} + e^{ik_n l}) \\ &= -(N - M + 1) + 2\mathcal{L}\delta(l) + \sum_{p \in \mathcal{P}} (\mathcal{A}_p \delta(l - l(p)) + \mathcal{A}_p^* \delta(l + l(p))). \end{aligned} \quad (22)$$

This mistake does not affect the rest of the paper.

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