Addendum to: Laplacian Eigenproblems on Product Regions and Tensor Products of Sobolev Spaces

from JMAA Vol 435, (2016), pp 842 - 859.

On page 858, Section 11, 2nd paragraph, equation (11.1) holds when the function $b(\cdot)$ is constant on $\partial\Omega$.

The fourth paragraph should be changed to the following.

One could ask "What is the orthogonal complement of $H_0^1(\Omega_p)$ in $H^1(\Omega_p)$ with respect to the inner product associated with the tensor product of $H^1(\Omega_1)$ and $H^1(\Omega_2)$ and $b(\cdot)$ is constant on each factor $\partial \Omega_j$? Note that this is a different, but equivalent, inner product on $H^1(\Omega_p)$.

In the proof of Theorem 11.1, the space V is the orthogonal complement with respect to the tensor product inner product.

A better version of the last paragraph of the paper is the following.

This theorem implies that any function with non-zero trace on $\partial \Omega_p$ can be uniquely decomposed into a function with zero boundary trace plus a function in V. Thus V is linearly isomorphic to the trace space of $H^1(\Omega_p)$. This is a different characterization to that of equation (11.1) since this is a different inner product.