Corrigendum to “Nonself-dual Chern–Simons and Maxwell–Chern–Simons vortices on bounded domains”

Jongmin Han a, Namkwon Kim b,*

a Department of Mathematics, Hankuk University of Foreign Studies, 89 Wangsan-ri Mohyun, Yongin, Kyounggi-do 449-791, Republic of Korea
b BK21 and School of Mathematical Sciences, Seoul National University, Seoul 151-747, Republic of Korea

Available online 18 April 2006

The authors regret to find the following mistakes in the proof of Theorem 3.7.

1. Last line 3 on p. 190 should be replaced with the following:

   Meanwhile, denoting $|\Omega|^{-1} \int \tilde{A}_0^q = C_q$,

   $\int |u^q||C_q| - \int |u^q||\tilde{A}_0^q - C_q| \leq \int_{\Omega} |u^q| |\tilde{A}_0^q| \leq C \int_{\Omega} |u^q| |\tilde{A}_0^q|^2 < C$

   uniformly by (3.9). Also, $\int |u^q||\tilde{A}_0^q - C_q| < C$ uniformly by Step 1, the fact curl $\tilde{A}_0^q \in H^{-1} + L^p$, and the Poincaré inequality. Thus, $|C_q|$ is bounded uniformly taking it into account that $|u^q| \to |u^\infty|$ in $L^2$. This implies $\tilde{A}_0^q \in L^2$ uniformly by the Poincaré inequality.

2. Lines 7–9 on p. 191 should be replaced with the following:

   $\|\mu F_{A^\infty} + 2|u^\infty|^2 A_0^\infty\|_{H^{-1}} = \|\mu F_{A^\infty} + 2|u^\infty|^2 A_0^\infty - (\mu F_{B^\infty} + 2|u^q|^2 \tilde{A}_0^q)\|_{H^{-1}}$

   $\leq \mu \|F_{A^\infty} - F_{B^\infty}\|_{H^{-1}} + C \|u^q\|_{L^4} \|A_0^\infty\|_{L^2} + C \|u^q\|_{L^8}^{\frac{4}{3}} \|\tilde{A}_0^q - A_0^\infty\|_{L^2}$.