Nakaoka, M.
Osaka J. Math.
12 (1975), 215-216

CORRECTION TO
CHARACTERISTIC CLASSES WITH VALUES IN COMPLEX COBORDISM

MINORU NAKAOKA

This Journal, vol. 10 (1973), 521–543

(Received May 12, 1974)

In the proof of Theorem 7 it is asserted that there exists $\alpha\in U^*(B_G\times M)$ such that

$$\alpha q(\tau(M))=w^{m'}\,,\quad r_0^*(\alpha)=0\,.$$

The proof of this assertion is not correct. Under a further assumption that $U_*(M)$ *is projective over* $U_*(pt)$, this is proved correctly as follows.

It follows from Lemma 2 and (7.1) that $i^*(id\underset{G}{\times}f^k)^*\Delta'=0$ for $i^*\colon U^*(E_G\underset{G}{\times}M^k)\to U^*(E_G\underset{G}{\times}(M^k-M))$ induced by the inclusion. Therefore there exists $\alpha\in U^{i-2m(k-1)}(B_G\times M)$ such that

$$(id\underset{G}{\times}f^k)^*\Delta'=j^*\phi_{\nu_1}(\alpha)\,,$$

where $\phi_{\nu_1}\colon U^*(B_G\times M)\cong U^*(E_G\underset{G}{\times}(M^k,\ M^k-M))$ is the Thom isomorphism, and $j^*\colon U^*(E_G\underset{G}{\times}(M^k,\ M^k-M))\to U^*(E_G\underset{G}{\times}M^k)$ is induced by the inclusion. It is easily seen that the diagram

$$\begin{tikzcd}
U^{i-2m(k-1)}(M) \arrow[d, "d_!"] & U^{i-2m(k-1)}(B_G\times M) \arrow[l, "r_0^*"'] \arrow[r, "\cdot e(\nu_1)"] \arrow[d, "j^*\circ\phi_{\nu_1}"] & U^i(B_G\times M) \\
U^i(M^k) & U^i(E_G\underset{G}{\times}M^k) \arrow[l, "r^*"] \arrow[ur, "(id\underset{G}{\times}d)^*"']
\end{tikzcd}$$

is commutative, where r and r_0 are the inclusions, and $d_!$ is the Gysin homomorphism induced by the diagonal map $d\colon M\to M^k$. Consequently we have

$$(8.1)\qquad (id\underset{G}{\times}d)^*(id\underset{G}{\times}f^k)^*\Delta'=\alpha\cdot e(\nu_1)\,,$$

$$(8.2)\qquad r^*(id\underset{G}{\times}f^k)^*\Delta'=d_!r_0^*(\alpha)\,.$$