

**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 $i^*(id \times_g f^k)^* \Delta' = 0$ for $i^*: U^*(E_G \times_g M^k) \rightarrow U^*(E_G \times_g (M^k - M))$ induced by the inclusion. Therefore there exists $\alpha \in U^{i-2m(k-1)}(B_G \times M)$ such that

$$(id \times_g f^k)^* \Delta' = j^* \phi_{v_1}(\alpha),$$

where $\phi_{v_1}: U^*(B_G \times M) \cong U^*(E_G \times_g (M^k, M^k - M))$ is the Thom isomorphism, and $j^*: U^*(E_G \times_g (M^k, M^k - M)) \rightarrow U^*(E_G \times_g M^k)$ is induced by the inclusion. It is easily seen that the diagram

$$\begin{array}{ccccc} U^{i-2m(k-1)}(M) & \xleftarrow{r_0^*} & U^{i-2m(k-1)}(B_G \times M) & \xrightarrow{\cdot e(v_1)} & U^i(B_G \times M) \\ \downarrow d_1 & & \downarrow j^* \circ \phi_{v_1} & \nearrow (id \times_g d)^* & \\ U^i(M^k) & \xleftarrow{r^*} & U^i(E_G \times_g M^k) & & \end{array}$$

is commutative, where r and r_0 are the inclusions, and d_1 is the Gysin homomorphism induced by the diagonal map $d: M \rightarrow M^k$. Consequently we have

$$(8.1) \quad (id \times_g d)^*(id \times_g f^k)^* \Delta' = \alpha \cdot e(v_1),$$

$$(8.2) \quad r^*(id \times_g f^k)^* \Delta' = d_1 r_0^*(\alpha).$$

It follows from (6.1), (6.3) and (8.1) that

$$\alpha q(\tau(M)) = (id \times f)^* q(\tau(M')),$$

and from (8.2) that

$$d_1 r_0^*(\alpha) = (f^k)^* r'^*(\Delta'),$$

where $r': M'^k \rightarrow E_G \times_{\mathcal{G}} M'^k$ is the inclusion. Since f is null-homotopic, these imply that

$$\alpha q(\tau(M)) = w^{m'}, \quad d_1 r_0^*(\alpha) = 0.$$

Thus it suffices to prove that d_1 is injective. Since $U_*(M)$ is projective over $U_*(pt)$, it holds that

$$U^*(M) \cong \text{Hom}_{U_*(pt)}(U_*(M), U_*(pt))$$

(see [2]). Therefore, if $b \in U_*(M)$ is not zero then there exists $\beta \in U^*(M)$ such that $\langle \beta, b \rangle \neq 0$. Since $\langle \beta \times 1 \times \cdots \times 1, d_* b \rangle = \langle \beta, b \rangle$, it follows that d_* and hence d_1 is injective.