

**Corrections to "Some Differentials in the mod p
Adams Spectral Sequence ($p \geq 5$)"**

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(Received December 16, 1976)

In Theorem 2.4 of our paper [1], we used the relation $d_3(g_{2,0}x) = 0$. However, there holds a differential

$$(*) \quad d_3(g_{2,0}x) = \alpha b_{01} h_0 b_{11} a_2 \quad \text{for some } \alpha \in \mathbb{Z}_p,$$

and it seems that the coefficient α cannot be determined by matrix Massey products in $H^{**}(A)$ and the known relations in $\pi_*(S; p)$. Also in Theorem 4.1 and Proposition 4.2 (iii), we asserted that

" $\pi_{(2p^2+2p+1)q-5}(S; p)$ is \mathbb{Z}_p with the generator $\beta_1 \rho'_1$ and $\beta_1^{p-1} \kappa_1 = 0$ in this stem",

and it is easy to see that $\beta_1^{p-1} \kappa_1 = 0$ is equivalent to $\alpha = 0$.

On the other hand, S. Sakurai and A. Tsuchiya (unpublished) have recently obtained the relation $\beta_1^{p-1} \kappa_1 \neq 0$ by computing $\text{Ext}_{BP^*BP}^{***}(BP^*, BP^*)$, the E_2 -term of the Adams-Novikov spectral sequence. This means $\alpha \neq 0$.

By this result of S. Sakurai and A. Tsuchiya, we must correct the above assertion as follows:

$$"\pi_{(2p^2+2p+1)q-5}(S; p) \text{ is } \mathbb{Z}_p \text{ and generated by } \beta_1^{p-1} \kappa_1".$$

Furthermore, we see easily from (*) with $\alpha \neq 0$ that we must correct Theorems 2.4, 3.2, 4.1 and Proposition 4.2 in [1] as follows:

1-1. In Theorem 2.4, I. (vii) should be replaced by

$$"\text{(vii) } d_3(b_{01}^k g_{2,0}x) = b_{01}^{k+1} h_0 b_{11} a_2, \quad k \geq 0".$$

1-2. In Theorem 2.4, I. (viii) should be deleted.

1-3. In Theorem 2.4, the case $l=0$ should be added to II. (iii), i.e., " $1 \leq l \leq p-4$ " in II. (iii) should be replaced by " $0 \leq l \leq p-4$ ".

2-1. In Theorem 3.1 (8), the element $h_0 b_{01}^{p-1} k_{1,0} b_{02}$ should be added, i.e., " $1 \leq l \leq p-4$ " in (8) should be replaced by " $0 \leq l \leq p-4$ ".

2-2. In Theorem 3.1 (14), the element $b_{01} h_0 b_{11} a_2$ should be deleted.

3. In Theorem 4.1, the element $\beta_1 \rho'_1 (= \alpha_1 \rho'')$ should be replaced by the element $\beta_1^{p-1} \kappa_1$.

4-1. In Proposition 4.2 (ii), the element ρ'_1 should be deleted.

4-2. In Proposition 4.2, (iii) should be deleted.