95. *Corrections to The Mean Square of Dirichlet L-Functions*

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The following errors were contained in [1].

(1) In the statement of Theorem 1, the term $4(2\pi/q^3)^{1/2}\left(\sum_{n=1}^{q-1}{}' n\right)T^{1/2}$ should be omitted. Hence, the comment on this term in p. 444 has no meaning. (The Corollary is still valid as it is, but now, a better result was observed by Motohashi [2].)

(2) In § 2, we quoted the Riemann-Siegel formula of Dirichlet L-functions with the error term $O(q^{-1/4}t^{-3/4})$. (By misprint the minus sign of the exponent of t was missing.) This error term should be read as $O(q^{5/4}t^{-3/4})$. Though the dependency with respect to q is implicit in [3], we obtain only a quite poor estimate of this error term with respect to q, if we follow Siegel's argument directly. By a residue calculus, however, we can improve the estimate to obtain $O(q^{5/4}t^{-3/4})$. This change of the error estimate has no influence on our final result.

References

[1] Matsumoto, K.: The mean square of Dirichlet L-functions. Proc. Japan Acad., **58**A, 443–446 (1982).
[2] Motohashi, Y.: A note on the mean value of the zeta and L-functions. II. ibid., **61**A, 313–316 (1985).
[3] Siegel, C. L.: Contribution to the theory of the Dirichlet L-series and the Epstein zeta-functions. Ann. of Math., **44**, 143–172 (1943).