

Proof of Theorem 1. If we define

$$t_j = d(jN - a(1)),$$

then, by Lemma 2 with $k = r+1$,

$$t_j = t_{j-1} + \sum_{i=1}^r \left(\sum_{\substack{\alpha \in A' \\ w(\alpha)=i}} q^{jN-\alpha} \right) \prod_{h=1}^{i-1} (1 - q^{N-(j-h)}) t_{j-i}.$$

By definition of $d(m)$ for negative m , $t_0 = 1$ and $t_{-n} = 0$ for $n > 0$. Hence by Theorem 2 of [1], p. 129,

$$\begin{aligned} 1 + \sum_{n=1}^{\infty} G(-A'_N; n) q^n &= \lim_{i \rightarrow \infty} t_i = \prod_{m=1}^{\infty} \left(1 + \sum_{i=1}^r \left(\sum_{\substack{\alpha \in A' \\ w(\alpha)=i}} q^{-\alpha} \right) q^{imN} \right) \\ &= \prod_{m=1}^{\infty} (1 + q^{mN-a(1)})(1 + q^{mN-a(2)}) \dots (1 + q^{mN-a(r)}) \\ &= 1 + \sum_{n=1}^{\infty} F(-A_N; n) q^n. \end{aligned}$$

Thus $G(-A'_N; n) = F(-A_N; n)$.

References

- [1] G. E. Andrews, *On Schur's second partition theorem*, Glasgow Mathematical Journal 8(1967), pp. 127-132.
 [2] — *A general theorem on partitions with difference conditions*, Amer. J. Math. (to appear).
 [3] P. Dienes, *The Taylor Series*, New York 1957.
 [4] I. J. Schur, *Ein Beitrag zur additiven Zahlentheorie*, S.-B. Akad. Wiss. Berlin (1917), pp. 301-321.
 [5] — *Zur additiven Zahlentheorie*, S.-B. Akad. Wiss. Berlin (1926), pp. 488-495.

THE PENNSYLVANIA STATE UNIVERSITY

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Corrigendum to the paper "On the zeros of L -functions"

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by

E. FOGELS (Riga)

The formula (34) of the paper in question should be replaced by the following:

$$(34^*) \quad V < \frac{e^{c_1 T^{\lambda}}}{\log^2 T} \sum_{T^B < n < T^{3B}} \frac{A(n)}{n} \sum_{\substack{T^B < m < T^{3B} \\ m \equiv n \pmod{D}}} h \frac{A(m)}{m} \left| \sum_{1 \leq j \leq V} \left(\frac{m}{n} \right)^{iw_j} \right|.$$

Proof. By the arguments of § 9 and § 5 we have

$$\begin{aligned} V &< e^{c_1 T^{\lambda}} \sum_{1 \leq j \leq V} \left| \sum_{T^B < n < T^{3B}} \frac{\chi_j(n) A(n) R(n)}{n^{1+i(T_0+w_j)}} \right|^2 \\ &\leq e^{c_1 T^{\lambda}} \sum_{1 \leq j \leq V} \sum_{\chi} \left| \sum_{T^B < n < T^{3B}} \frac{\chi(n) A(n) R(n)}{n^{1+i(T_0+w_j)}} \right|^2 \\ &= e^{c_1 T^{\lambda}} \sum_{1 \leq j \leq V} \sum_{\chi} \sum_{T^B < n < T^{3B}} \frac{\chi(n) A(n) R(n)}{n^{1+i(T_0+w_j)}} \sum_{T^B < m < T^{3B}} \frac{\overline{\chi(m)} A(m) \overline{R(m)}}{m^{1-i(T_0+w_j)}} \\ &= e^{c_1 T^{\lambda}} \sum_{1 \leq j \leq V} \sum_{T^B < n < T^{3B}} \frac{A(n) R(n)}{n} \sum_{\substack{T^B < m < T^{3B} \\ m \equiv n \pmod{D}}} h \frac{A(m)}{m} \overline{R(m)} \left(\frac{m}{n} \right)^{i(T_0+w_j)} \\ &= e^{c_1 T^{\lambda}} \sum_{T^B < n < T^{3B}} \frac{A(n) R(n)}{n} \sum_{\substack{T^B < m < T^{3B} \\ m \equiv n \pmod{D}}} h \frac{A(m)}{m} \overline{R(m)} \sum_{1 \leq j \leq V} \left(\frac{m}{n} \right)^{i(T_0+w_j)} \\ &\leq e^{c_1 T^{\lambda}} \sum_{T^B < n < T^{3B}} \frac{A(n) |R(n)|}{n} \sum_{\substack{T^B < m < T^{3B} \\ m \equiv n \pmod{D}}} h \frac{A(m)}{m} |R(m)| \left| \sum_{1 \leq j \leq V} \left(\frac{m}{n} \right)^{i(T_0+w_j)} \right|, \end{aligned}$$

whence (34*) follows. Using (34*) instead of (34) we can proceed as in § 9. The formula at the end of § 10 undergoes a similar exchange.

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