Correction to: "Finite Planes with a Single (p, L) Transitivity"

By

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DEMBOWSKI has called the author's attention to an error in the proof of Theorem 3 of [1]. (The error was originally noticed by PICKERT.) The author stated that in case (3), the group generated by G and the (p, L) elations splits the points of π^* into exactly two orbits. The correct conclusion would have been that L is of type (ii) and that there are three orbits. One of these orbits consists of a single point at infinity different from (∞) and consists of all points on $x = 0$.

However, ROSATI [2] has proved a theorem which is essentially equivalent to our Theorem 3 except for mild restrictions. We give Rosati's theorem below in our notation as a corrected version of our theorem 3:

Theorem 3'. *If $\bar{T}$ is different from the exceptional Zassenhaus nearfields of order 23^2 and 59^2 , then the only point-line pair (p, L) such that p is on L and π^* is (p, L) transitive is the case $p = (\infty)$, $L = L_\infty$.*

References

- [1] T. G. OSTROM, Finite planes with a single (p, L) transitivity. Arch. Math. **15**, 378–384 (1964).
- [2] L. ROSATI, Su una nuova classe di piani grafici. Ricerche Mat. **13**, 1–17 (1964).

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