

**ERRATA:**  
***ℓ-ADIC IMAGES OF GALOIS FOR ELLIPTIC CURVES OVER  $\mathbb{Q}$***

JEMERY ROUSE, ANDREW V. SUTHERLAND, DAVID ZUREICK-BROWN  
WITH JOHN VOIGHT

This note gives errata for the article *ℓ-adic images of Galois for elliptic curves over  $\mathbb{Q}$*  [1].

- (1) Page 9, line 7: “that contain a conjugate of” should be “fixed by the action of”.
- (2) Table 9, section 11: The totals listed in the “SW” line of the first part of Table 9 are incorrect due to double counting 312435 elliptic curves of prime conductor that are included in two parts of the Stein–Watkins database. The Stein–Watkins database contains all elliptic curves over  $\mathbb{Q}$  of absolute discriminant at most  $10^{12}$  that have  $c_6$ -invariant of absolute value at most  $1.44 \cdot 10^{12}$  whose conductor  $N$  meets either of the following criteria (which are not mutually exclusive): (1)  $N \leq 10^8$ , (2)  $N \leq 10^{10}$  is prime.

The corrected counts in the first part of the table are:

SW 35585316 3671438 181222 43966 2048 7444 368 1024 97776484 136789294

The counts in the second part of the table are the same (none of the double-counted curves are non-surjective at more than one prime).

- (3) Proposition A.6: the final phrase should be “conductor dividing  $N$ ” (not “character of modulus  $N$ ”).

REFERENCES

- [1] Jeremy Rouse, Andrew V. Sutherland, and David Zureick-Brown, *ℓ-adic images of Galois for elliptic curves over  $\mathbb{Q}$* , appendix with John Voight, *Forum Math. Sigma* **10** (2022), e62.