

# ERRATUM TO LEFSCHETZ THEOREMS FOR TORSION ALGEBRAIC CYCLES IN CODIMENSION 2

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In the proof of Proposition 5.1 [2], we state that there is an isomorphism  $A^2(V)_{\text{tors}} \cong J_0^2(V)_{\text{tors}}$  for any smooth projective algebraic variety  $V$ , which we attribute to Murre [1]. However, as Professor A. Collino pointed out to us, Murre's result only states that there is an isomorphism  $A^2(V)_{\text{tors}} \cong J_{\text{alg}}^2(V)_{\text{tors}}$ , and that a priori, one only has an inclusion  $J_{\text{alg}}^2(V)_{\text{tors}} \subset J_0^2(V)_{\text{tors}}$ . Consequently, Theorem 1.7 and Proposition 5.2 are true under the additional hypothesis that  $J_{\text{alg}}^2(V)_{\text{tors}} = J_0^2(V)_{\text{tors}}$ , which is implied by the generalized Hodge conjecture in codimension 2. We do, however, have the following unconditional statement:

The morphism  $\alpha : \text{Grif}^2(V)_{\text{tors}} \rightarrow (J^2(V)/J_{\text{alg}}^2(V))_{\text{tors}}$ , induced by the Abel-Jacobi map, is an inclusion.

This only affects results in §5 and doesn't affect our main results, *viz.* §1 - §4.

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## REFERENCES

- [1] J. P. Murre, *Applications of algebraic K-theory to the theory of algebraic cycles*, Algebraic geometry, Sitges (Barcelona), 1983, volume 1124 of Lecture Notes in Math., pages 216–261. Springer, Berlin, 1985.
- [2] D. Patel and G.V. Ravindra, *Lefschetz theorems for torsion algebraic cycles in codimensions 2*, Advances in Mathematics **316** (2017), 554–575.

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