

## Jacobians among abelian threefolds

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### Abstract

Let  $A$  be a principally polarized abelian threefold over a field  $k$ . If  $k$  is algebraically closed,  $A$  is a Jacobian (or a product of Jacobians). In general the situation is more complicated: there exists a canonical extension  $k'$  of  $k$ , of degree  $\leq 2$ , such that  $A$  becomes a Jacobian over  $k'$ . I will explain why this is so, and describe a geometric construction of this extension based on a classical construction of Recillas.

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