Étale Cohomology

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Exercise sheet 11[1]

Exercise 1. Let X and Y be sites. Let $f^{-1} : Y \to X$ be continuous. Assume furthermore the following:

(1) The category X has a final object f^{-1} preserves it.
(2) The category X has fibred products and f^{-1} commutes with them.

Then f^{-1} defines a morphism of sites $f : X \to Y$, in other words f^* commutes with finite projective limit.

Remark 1. This means that in our examples, namely the small étale site and the topological spaces, all the adjoint functors are morphisms of sites. See also Stack Project.

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[1] If you want your solutions to be corrected, please hand them in just before the lecture on January 18, 2017. If you have any questions concerning these exercises you can contact Shane Kelly via shanekelly64@gmail.com or Lei Zhang via l.zhang@fu-berlin.de.