CLARK BARWICK

LA LONGUE MARCHE

A RESEARCH DIARY

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2021

October

Absolute schemes in characteristic p 2021 October 11

Mike Hill suggested that I try to keep a regular research diary. It seemed like a good idea.

Here's a basic construction. If **Perf** denotes the category of perfect schemes of characteristic p, then there is an action of the circle $\boldsymbol{T}$ on this category, which on objects is given by the action of $\boldsymbol{Z}$ by the Frobenius F. I want to think about the orbits for this action **Perf** $/\boldsymbol{T}$. That's the 2-category whose objects are perfect schemes in characteristic p, whose 1-morphisms are morphisms of such, and whose 2-morphisms $f \to g$ are integers m such that $g = fF^m$.