

TITLE

Poincaré duality for rigid syntomic cohomology

ABSTRACT

Rigid syntomic cohomology is defined for smooth schemes over a complete DVR of mixed characteristic with perfect residue field: roughly speaking, we must glue the rigid cohomology of the special fiber with the de Rham cohomology of the generic one, taking into account respectively the Frobenius structure and the filtration. In order to interpret rigid syntomic cohomology as an absolute cohomology we will work in a suitable category of diagrams. This approach will enable us to define the compact support theory, the Poincaré duality and the Gysin morphism in the syntomic framework.