

Heuselian pair 86 Comparisons of K&TC \$6.1 Etale K-thry is TC (mod p) · Geisser - Hesselholt TC of schemes R: smooth / h perfect field of chan p =) the p-adic Gale k-theory of R = TC(R) We extend this: Thu 6. 1 (R, tn, &) sten local chark = P > 0 => (inc(R)/p=0 Proof by DGM we can assume R is discrete · by the warn thu Kinu (R) ~ Kinu(k)/p ~ assume R=k: sep.cl. field of char P k: ind-smooth To-algebra (h/ Fp[x] (Fz = perfect take trans, basis Thm 4.28 R: ind-smooth Fe-alg, N ≥ O functional Trn (K(R)/p) - vn(R), isom if R: local $| (2) \overline{\exists} 0 \rightarrow \widetilde{V}^{\text{nt}}(R) \rightarrow \pi_{\text{n}}(\text{TC}(R)/_{P}) \rightarrow V^{\text{n}}(R) \rightarrow 0$

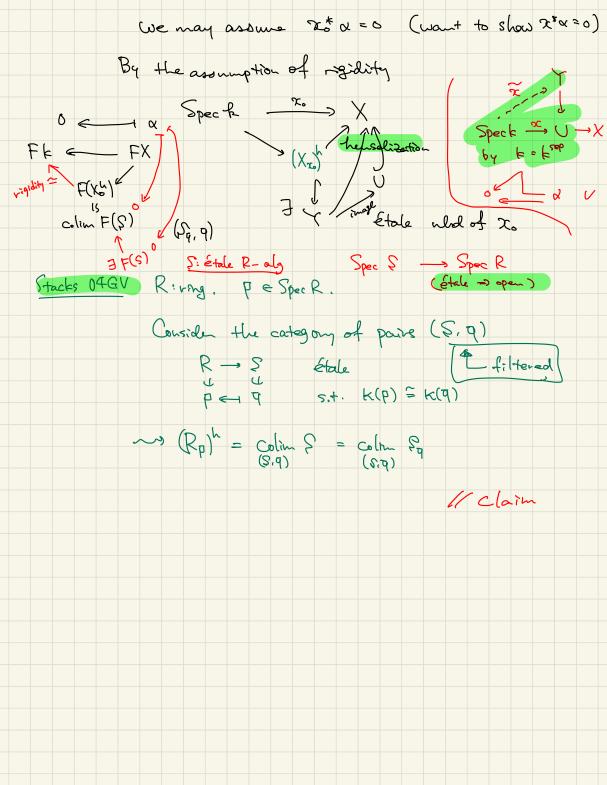
$$\begin{array}{c} \left(\frac{1}{2}\right) & \left(\frac{1}{2}\right) \\ & \left(\frac{1}{2}$$

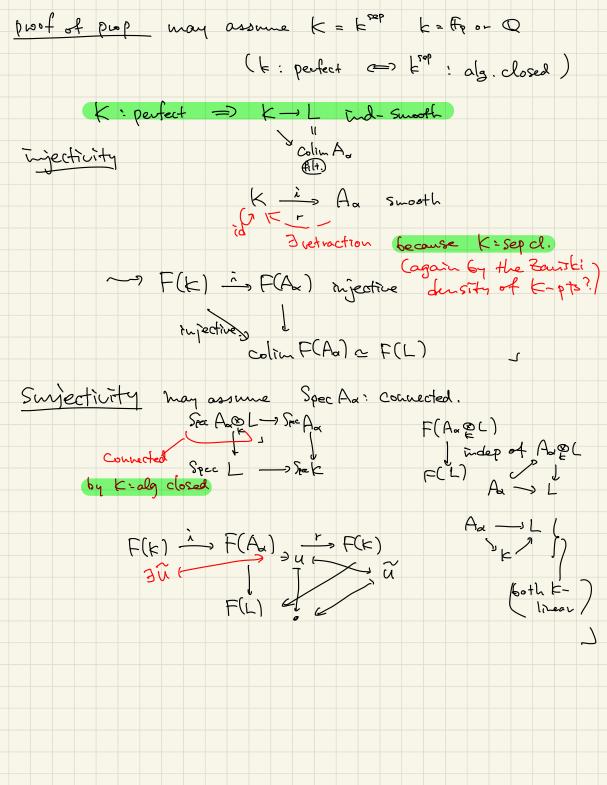
Alternative argument (vother than using Dr Suslivis argument description) ~> (inv(-)/p inarant under extension of sep cl. fields no reduced to Fig direct calc. Prop 6.2 F: Ring - Ab assure: (1) F comm. with fift colin harselization (2) rigidity (F(R) = F(R,I) for a geometric per heuselian pair) (strict) heuselian pair)

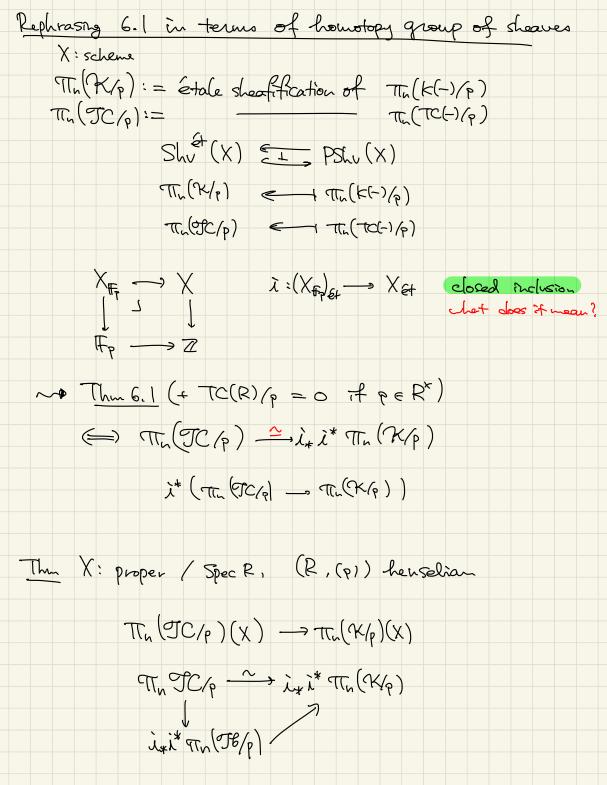
L/K, L=L'ap, K=K'sep

Speck Speck Seet

Claim Proof 9: X - Speck Connected smooth offine k-sch of finite type proof Fix xo: Speck - X show JU: Zanski ulid of xo Connectedness S.t. Vx: Speck - U, Zaroski density of $\forall \alpha \in F(\chi), (\chi^* - \chi^*)(\alpha) = 0$ of - pts of X (x*-x0)(a) = x* (a- 9*x0a) [04QM stacks] No replacing of by X-9+ To d.



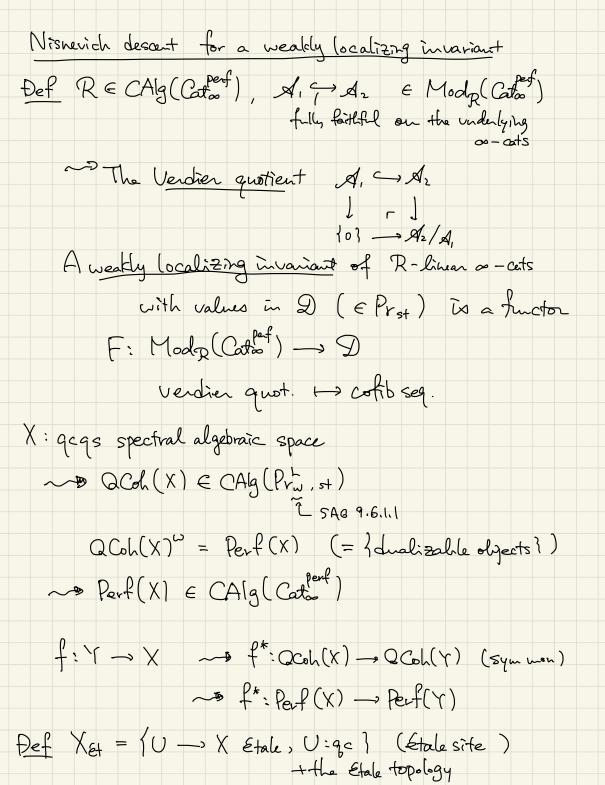




 $\pi_n(\mathcal{I}(P) \simeq i_*i^*\pi_n(\mathcal{K}/P)$ check stalkwise XFF, Et Ci X St $Shv_{Ab}(X_{F_{e}, \epsilon_{t}}) \stackrel{\stackrel{\lambda^{*}}{\Longrightarrow}}{\Longrightarrow} Shv_{Ab}(X_{\epsilon_{t}})$ X: geometric point The XF, then $x^* i_* = 0$ check $x \in X_{F_P}$ then $x^* \pi_n(TC(P))$ $x^* i_* i^* \pi_n(X/P)$ $x^* i_* i^*$ lim $\pi_n(TC(U)/P)$ $x^* \pi_n(X/P)$ on strictly herselian? lim $\pi_n K(U)/P$ is it true more generally that $Z \subset X$ closed I? 2 x*i, = 0 if x & Z 2 x*i, i* = x* if x ∈ Z

\$6.2 Asymptomatic Comparison of K & TC (mod P) Thun R: Comm. ring, p: prime (1) (R, (P)) henselian (2) R/P has finite Kull Limension $d:=\max\{1,\lceil\sup_{x\in Spec(R/r)}\log_p[k(x):k(x)]\}\}$ Then $K(R)/pr \longrightarrow TC(R)/pr$ is $TI_{\geq d}$ - equivalence $\forall r$ Proof K(R)/pr -> K(R/q))/pr -> We may assume TC(R)/pr -> TC(R/(p))/pr R: Fp-algebra K(R) conn cover |K(R) - TC(R) deg = 2 equiv cofiber/pt : (-1)-truncated] 0-trucated teplace K by K \$ pr \$ -> \$/pr · Thomason-Trobangh: Nishevich descent for K (10) · Blumberg-Mandell: Nisnevich descut for TC (1pt) dim R < 00 => (Spec R) Nis has homotopy dim < 00 (>> Postribor) complete =) Shusp (Spec R) is left complete

~ descent ss for F - (χνίς; πρίς Τ) => πη-ρ Τινίς (χ)



Thm Suppose F: Modperf(x) (Catoo) -> D is weakly localizing

T(n)-local for some implicit
p. n Then $X \in I \longrightarrow \mathcal{D}$ is a sheaf $(U \to X) \mapsto F(Perf(U))$ Nisherich descent (Nisherich excision