Theorem (Włodarczyk, Kollár) $C : C(I, a_1)$

Given x_1, x_1' max contact, $(x_1, x_2, \dots, x_n)$ reg. syst. of params, $(x_1', x_2, \dots, x_n)$

$\exists$ étale
$$\begin{tikzcd} & \tilde{Y} \arrow[dl, "\pi"'] \arrow[dr, "\pi'"] & \\ Y & & Y \end{tikzcd}$$
s.t. $\pi^* x_1 = \pi'^* x_1'$ M_C-invar.

$\pi^* x_i = \pi'^* x_i$

$C(\pi^*(I)) = \pi^* C = \pi'^* C = C(\pi'^* I)$

Prop: inv is functorial, well defined, u.s.c.

Proof: ord, $\mathcal{D}I$ functorial for smooth maps

$\Longrightarrow C(I, a_1)$ is functorial

$\Longrightarrow \mathrm{inv}_p(I, x_1, \dots, x_n)$ is functorial

$(x_1, \dots, x_n)$ extends $(x_1, \dots, x_k)$

x_1' after changing x_i by $x_i + f x_1$

$(x_1', x_2, \dots x_n)$ $\pi^* I[2] = \pi'^* I[2]'$

induct $\Longrightarrow a_2, \dots, a_k$ well defined

$\Longrightarrow (a_1, \dots, a_k)$ indep. of choices