c) exotic localization: localize with respect to

$$* \to B\mathbb{Z}/p \vee M(\mathbb{Z}[\tfrac{1}{p}], 1)$$

☆ X local $\iff$ $\mathrm{map}_*(B\mathbb{Z}/p \vee M(\mathbb{Z}[\tfrac{1}{p}],1), X) \simeq_{wk} *$

$\iff$ X p-complete and

$\mathrm{map}_*(B\mathbb{Z}/p, X) \simeq_{wk} *$

☆ $\therefore$ $A \xrightarrow{f} B$ mod p homology isom $\Longrightarrow$

f local equivalence: $\forall$ local X,

$\mathrm{map}(A, X) \xleftarrow[wk]{\simeq} \mathrm{map}(B, X)$

☆ Connected covers of X: X s.c.

$$\begin{array}{ccccccccccc}
 & K(\pi_{n+1}, n+1) & & & & K(\pi_4, 4) & & K(\pi_3, 3) & & K(\pi_2, 2) & \\
 & \uparrow & & & & \uparrow & & \uparrow & & \uparrow & \\
\cdots \to X\langle n+1\rangle \to & X\langle n\rangle & \to & \cdots & \to & X\langle 3\rangle & \to & X\langle 2\rangle & \to & X\langle 1\rangle & = X
\end{array}$$

where: $K(\pi_{n+1}, n) \to X\langle n+1\rangle \to X\langle n\rangle \to K(\pi_{n+1}, n+1)$

is a fibration sequence

$$\pi_i X\langle n\rangle = \begin{cases} 0, & i \leq n \\ \pi_i X, & i > n \end{cases}$$

Note: $\pi_i X = 0$ $\forall i > n$ $\iff$ $\pi_i X\langle n\rangle = 0$ $\forall i$

$\iff$ $X\langle n\rangle \simeq_{wk} *$

e.g. $S^2\langle 2\rangle \simeq S^3$