

$$\begin{array}{ccc}
 \mathcal{P}_k(W)_L & \xlongequal{\sim} & \mathcal{P}_L(W_L) \\
 \parallel \wr & & \parallel \wr \\
 k[X_1, \dots, X_n]_L & \xlongequal{\sim} & L[X_1, \dots, X_n]
 \end{array}$$